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ORIGINAL ARTICLES.

IODINE AND MERCURY TO COMBAT LOCAL INFECTIONS.

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WHEN the germ theory was in its infancy, Koch determined that mercuric iodide stood at the head of the list of the germicides then known, being capable of killing anthrax and other bacilli in the dilution of one part in 50,000 parts of water.

It is well known that the human system may be permeated by small quantities of either mercury or iodine without causing any unpleasant symptoms. When a patient has been taking potassium iodide in full medicinal doses, if calomel be dusted on the conjunctiva, a red color will be developed with coincident irritation due to the formation of mercuric iodide. Calomel being an insoluble substance the iodide of mercury is in this case developed on the surface of the mucous membrane and at first produces only a surface disinfection, but mercuric iodide being soluble in solutions containing potassium iodide, will penetrate more or less deeply and kill or inhibit some of the microbes imbedded in the tissues. If, instead of potassium iodide, the calomel be given internally in moderate doses frequently repeated, and a solution of iodine be applied locally, mercuric iodide will again be formed, but iodine being a diffusible substance and mercury being contained in the fluids of the body the penetration will be deeper and the local irritation less than when the calomel was locally applied.

This consideration led me about ten years ago to formulate and put in practice a general method of treating local infections, which has given most gratifying results in a great number and variety of clinical cases. The solution of iodine which I apply to mucous membranes is as follows: A menstruum is made of equal parts of glycerin and water. To this I add tincture iodine one dram to the ounce with a little belladonna and carbolic acid as local sedatives. This stock solution, which can be made up in a few minutes, from materials that every physician can carry, is applied through a simple hand atomizer to throat and nose, if these are the parts requiring local treatment, or it may be applied to uterus, vagina urethra or skin in any way the physician desires.

In using the atomizer I always direct the patient to hold the tube between the teeth with lips closed in the same position as in smoking a pipe and to *breathe through the nose.* The bulb is worked vigorously and the fine spray will be seen issuing from the nostrils, showing plainly that the whole interior of throat and nose is covered with the spray. If the mouth be open while spraying the spray strikes the posterior wall of the pharynx and flies back out of the mouth without reaching the postnasal space at all. Even small children readily learn to "smoke a pipe" in this way and may have their throats pleasantly and painlessly disinfected many times a day.

In February, 1899, when the snow was 2½ feet deep on a level and drifted to six feet in all the roads, I was called to a house three miles from home wherein I found a father, mother and fifteen children (negroes) living in four rooms. Five of the children had diphtheria. It was the middle house in a row of small tenements and the family was receiving frequent friendly visits from near neighbors on either side. The infection was traceable to a previous case of diphtheria about a mile away where one of the children had been staying.

Owing to the impassable roads no antitoxin could be obtained and I quickly resolved to give my method a thorough test. The calomel was commenced at once and a messenger despatched for an atomizer and a pound of formaldehyde solution. The mother was directed to spray the throats with iodine solution every two hours and each time to pour a little formaldehyde on the hot stove. Communication with the outside world was cut off as far as possible both by telling the family and warning others of the danger. The effect of treatment was very marked within the first twenty-four hours. Even the baby three months old took it well, and all progressed favorably to recovery without a single complication. Two new cases developed in the family and these also were successfully treated. There was no spread of the infection to other houses.

In several of these cases I found that when the calomel was pushed the false membrane would clean off when the iodine spray alone seemed to have little effect. Of course, now, I always use antitoxin at the earliest possible moment and take pains to keep a fresh supply on hand, but this does not kill the bacillus of Loeffler, or prevent it from being carried for weeks or months in the throat of a recovered patient. By using antitoxin, mercury and iodine simultaneously, the enemy is attacked in front, flanks and rear, and the only terms are unconditional surrender.

Rheumatism is another infection now generally believed to enter by the tonsil and the painful condition of the tonsil always gives warning of its presence. Here the mercury and iodine achieve brilliant results, and if applied early, suppuration of the tonsil, and joint and heart complications rarely occur. When called to a case of acute articular rheumatism (even if gonorrheal), it is my practice to apply an iodine

plaster to the affected joint. A piece of Z. O. adhesive plaster about six by eight inches has a thin layer of absorbent cotton or lint spread on the sticky side leaving a margin uncovered about 1½ inch wide all around. The cotton is moistened with tincture iodine, tincture belladonna and spirits of camphor, equal parts. The plaster is warmed, applied and covered with flannel. If the pain is not controlled in twenty-four hours I raise one edge of the plaster and pour in more of the solution, covering the leak with a fresh piece of plaster; not forgetting to push the mercury internally and also give a little acetanilid and salol. Morphine is very seldom needed where this treatment is begun early. Even in sciatica these measures have given me better results than any other treatment.

Subcutaneous infections, such as boils, carbuncles, phlegmons, felons, etc., are treated with the happiest results. Here I usually combine ichthyol and tincture iodine of each one part with six parts of boroglyceride. Apply on lint or absorbent cotton and cover with parchment paper and a bandage. The same treatment is very effective in erysipelas and in mammary inflammations. In local infection of the uterus occurring after abortion or parturition this method has given excellent results. Being harmless and painless the solution may be injected directly into the uterine cavity with a hard rubber syringe having a long slender nozzle. The depleting action of the glycerin is here a valuable adjunct. Where the cervix and vagina only need treatment the patient may be trusted to make the applications herself, as but a teaspoonful of the iodine, ichthyol and boroglyceride injected into the vagina and left there two or three times a day, is sufficient. I have not yet given the method sufficient trial in chronic skin diseases but believe it will have a field of usefulness in acne, eczema, tricophytosis and other intractable affections.

In writing this paper I have directly violated the advice of my revered professors, given twenty years ago: "Avoid routine practice. Treat patients, not disease." But we are surely progressing toward specific treatment for infectious maladies. An enlightened public and the physician's own conscience demand that he be an aggressive fighter, prepared and striving to *cure* disease whenever possible; frequently successful in arresting invasions that soon would be beyond control.

Spleen in Pernicious Anemia.—In a number of cases of pernicious anemia examined by O. KURPUWEIT (Deutsch. Arch. f. klin. Med., Vol. 80, Nos. 1 and 2) the spleen was not enlarged. Microscopically, elements were found, which are not usually described, namely cells characteristic of the bone-marrow, such as neutrophile and eosinophile myelocytes, normo- and megaloblasts. The spleen was then examined at a number of other autopsies, with the result that eosinophiles, myelocytes and normoblasts were encountered wherever the spleen was altered through congestion, inflammatory processes and severe anemia. Since these cells normally do not belong to the spleen, it is safe to assume that the splenic tissue can easily undergo myeloid transformation.

A BRIEF REPORT OF FOUR YEARS OF GENITO-URINARY WORK IN THE SECOND SURGICAL DIVISION OF MOUNT SINAI HOSPITAL.

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(Continued from Page 1166.)

Until our results are less satisfactory than they are at present suprapubic prostatectomy will be our method of choice. Although portions of the urethra have come away with the prostate in some cases, the writer believes that with care and not too great haste this may almost always be avoided.[1] The operation is rapid, comparatively bloodless, and is followed by a minimum degree of shock. It permits of a quick and accurate examination of all portions of the bladder with the removal of calculi even when they are encysted. Wounding of the rectum is very rare, and has not occurred in any of our cases. The wound heals within three or four weeks, the function of urination returning sometimes as early as the tenth day. Impotency rarely if ever follows. Believing that the technic of the operation has very much to do with its success, I will give the steps in a few words:

1. Passing of catheter and washing the bladder, leaving the viscus empty, and attaching a rubber atomizer bulb to the catheter.

2. Incision 2 or 2½ inches long, in the linea alba with retraction of the recti.

3. Inflation of the bladder by an assistant. (There being no ligature about the penis, there is no dangerous air tension so long as the catheter is not very large. Besides, the finger of the operator in the wound would at once detect dangerous pressure.)

4. Retraction of the peritoneal reflection.

5. Insertion of two retraction sutures into the vesical wall.

6. Puncture of the bladder with a narrow-bladed knife and the enlarging of this opening with the dressing forceps. (Thus far about a minute to a minute and a half may have been consumed, without any appearance of haste, provided careful preparation has been made for each step.)

7. Exploration of bladder and palpation of prostate.

8. An assistant places his finger in the rectum and pushes up the prostate which is now caught firmly with bullet forceps or vulsella.

9. A sagittal incision of the mucosa and prostatic substance with scissors.

10. Enucleation of the organ with the ungloved finger. (One need not hurry during this important step of the operation. It is better to work a little slowly than too roughly or carelessly. The entire procedure will be found to have consumed not more than say from ten to fifteen minutes.)

11. Thorough flushing of the bladder through the wound with hot saline solution.

12. Packing of the prostatic portion of the

[1] The writer does not believe that the urethra should be removed by preference, in spite of the good showing of Moynihan. Annals of Surgery, Jan., 1904.

wound through a very large endoscope or a Kelly's cystoscope inserted into the wound.

We have found the perineal drain to be unnecessary and, if anything, a detriment. Careful continuous siphonage with frequent flushing of the bladder answer every purpose. For the first thirty-six to forty-eight hours after the operation the packings are left in, the gauze upon the abdomen being changed as often as it becomes saturated. Then the packings are removed, the tube is inserted and siphonage begun.

Very old or feeble individuals, in whom the danger from pulmonary hypostasis is great, may be allowed to sit up out of bed on the third day, the siphonage being temporarily interrupted.

There is no time here to go into the matter of preparation for the operation, the proper selection of cases and many other interesting and important points.

In the matter of carcinoma of the prostate, I must say that I cannot agree with Harrison, who considers it bad surgery to curet suprapubically. On the contrary, I have given much relief in these cases and believe it to be justifiable and surgical.

Case XI.—Vesical Calculus; Prostatic Hypertrophy; Suprapubic Lithotomy; Prostatectomy; Cure.

Joseph S., aged seventy-seven years, had never had any genito-urinary disease. For years there had been frequent urination at night. There was an attack of cystitis with retention some months before admission. Since then urination consisted merely in overflow unless the catheter was employed. There had been a left epididymitis, hematuria intermittent in character, and spasm of the vesical sphincter frequent and severe. Soft rubber catheter entered with difficulty and a Mercier not at all, because of the sensitiveness of the deep urethra. The circulation was sluggish as shown by edema of the legs and ankles. There was no valvular cardiac disease, but some senile myocarditis. Urine was apparently normal so far as renal elements were concerned, but there was blood mucus, etc., from the bladder. By rectum, an enlargement of the middle lobe of the prostate the size of a large egg was noted. Calculus was suspected, but no sounding was done because an operation was contemplated in any event. He was admitted January 3, 1903, after pretty thorough preparation at home (he was a private patient).

On January 4 lithotomy and suprapubic prostatectomy without perineal drainage was done by the writer. A soft, porous stone as large as an almond was found encysted in the wall of the bladder in the trigonum. Several smaller stones were also removed. The right, left and middle lobes of the prostate were enucleated. Time, thirty minutes. The portions of the prostate removed were small fibromata, very firm in consistency. (Pathological report by Dr. Mandlebaum.) No shock followed the operation. There was some superficial sloughing of the external wound, perhaps due to the formalin liberated from the urotropin which the patient was taking. He was out of bed five days after the operation. On February 12 the tube was removed and he passed considerable urine, four ounces at a time, by the urethra. February 15 he was discharged cured.

Note.—All edema has disappeared and he can walk six miles at a time without abnormal fatigue. He has remained perfectly well and is apparently rejuvenated.

Case XII.—Hypertrophy of Prostate; Suprapubic Prostatectomy; Cure.

S. S., sixty-five years old, was admitted May 4, 1903. He had been seen by Dr. Wiener in July, 1902, during a similar illness and since then there had been repeated attacks of pain, especially during the past six months. He gave a history of the usual symptoms of prostatic hypertrophy. The prostate was moderately enlarged and tender. No instrument could be passed into the bladder because of an obstruction at the prostatic urethra. Attempts at catheterization had been followed by bleeding. On admission the prostate was found to be, when examined per rectum, moderately enlarged, especially the lateral lobes. The patient passed 3½ ounces of urine, was then catheterized and 22 ounces of residual urine were withdrawn.

On May 17 suprapubic prostatectomy under nitrous oxide gas was performed by Dr. Wiener. Time, seventeen minutes. The prostate, the size of a small lemon, came out in one mass, traversed by the urethra. Convalescence was somewhat interrupted by the formation of an abscess in the scrotum, but about June 15 the patient was passing his urine through the natural channels and was discharged cured.

Case XIII.—Hypertrophy of Prostate; Suprapubic Prostatectomy; Cure.

William N., aged eighty-two years, was admitted January 28, 1903. He had had gonorrhea several years ago, the attack lasting several months. He had had symptoms of prostatic enlargement for many years with his first complete retention about three weeks before, and since then had to be catheterized every day. A soft rubber catheter passed readily. By rectum a fairly hard, medium-sized prostate was felt. On January 28 suprapubic prostatectomy, under nitrous oxide gas and ether, was performed by Dr. Wiener. Time, fourteen minutes. The prostate was two inches in diameter, hard and fibrous, almost globular and traversed by the prostatic urethra. The packings were removed on the third, fourth and fifth days. On February 22 the tube was taken out and a small amount of urine was passed through the penis. After this, except for a slight attack of epididymitis, convalescence was normal and he was discharged on March 24, passing every drop of urine by the urethra and with no residual.

Case XIV.—Prostatic Hypertrophy; Suprapubic Prostatectomy; Cure.

Wolf C., aged fifty seven years, had suffered for about ten months with symptoms referable to

an enlarged prostate. He had had four or five urinations at night, painful and burning. He was admitted on July 3, 1903. One ounce of residual urine was found when catheterized. No. 28 sound passed into the bladder. On July 7 suprapubic prostatectomy was performed under nitrous oxide gas by Dr. Wiener and a mass about the size of a lemon was removed, being shelled out with considerable difficulty in nineteen minutes. On July 17, after good reaction, pyocyaneous infection was found in the lower part of the wound. This infection was killed by the application of ether followed by carbolic acid spray, so that, on the following day, no evidences were visible.

On August 19 the drainage tube was left out of the suprapubic wound, but urination by the natural channels was impossible.

On August 25 perineal section for postoperative stricture of the urethra was performed by Dr. Wiener. Numerous attempts having been made to enter the bladder with a great variety of sounds and catheters without success, a perineal section was made and the urethra opened. It was then found that the deepest portion of the urethra was apparently obliterated. The suprapubic wound was enlarged and retrograde sound admitted with success. Then, when the bladder was inspected with the illuminating endoscope, with the finger in the perineal wound, what appeared to be the urethral dimple could be palpated. The bladder was opened through the perineal incision. Large catheter (30 Fr.) drained through the perineum. The suprapubic and perineal wounds were dressed dry. On September 10 the patient was discharged. He was able to pass every ounce of urine voluntarily, most of the urine coming through the perineal wound but none through the suprapubic opening.

On September 17 the patient was readmitted for the treatment of a right epididymitis which soon yielded to appropriate remedies. The perineal wound had contracted to a considerable degree and it soon healed, but there was constant dribbling of urine, with no voluntary urination. At present he is able to hold six ounces of urine and is gradually regaining normal control, though he finds it necessary to wear a urinal when he goes out.

Case XV.—Prostatic Hypertrophy; Chronic Cystitis; Suprapubic Cystotomy and Prostatectomy; Cure.

M. L. M., aged seventy-five years, had suffered for about five years with the symptoms common in cases of senile hypertrophy of the prostate. He had occasional attacks of epididymitis and was obliged to use the catheter at each urination. For five days before admission on September 5, 1903, he had had daily chills. His general condition was poor although he was quite obese. Slight icterus was present. Emphysema and a slight bronchitis complicated the case still further. His heart's action was irregular and slow, the basal sounds equal and indistinguishable. The first apical sound was rough. The pulse was irregular and of poor quality. On September 15 Dr. Wiener operated under eucaine, 4 per cent., continuing with nitrous oxide gas after the bladder had been reached. The patient's condition being very miserable, the removal of the prostate was deferred for eleven days, until September 26 when it was enulceated in eight minutes with very little hemorrhage under nitrous oxide anesthesia. There were two median lobes the size of a plum. About one inch of the urethra was removed with the prostate. On October 30 he was discharged, still passing his urine through the wound.

Case XVI.—Hypertrophy of Prostate; No Operation; Death.

Charles K., seventy-five years old, was admitted October 25, 1903, in an almost moribund condition, delirious, with urinary sepsis, and two large bedsores. He was not a proper subject for any operation and died on November 4. No autopsy.

Case XVII.—Retention of Urine; Uremia; Prostatic Hypertrophy; No Operation; Death.

I. R., aged ninety-two years, was admitted May 28 almost moribund. His mental condition was such that no satisfactory history could be obtained. His present illness was said to be of two days' standing, during which time he had not been able to urinate without a catheter. Soon after admission 31 ounces of bloody urine were withdrawn with a silver catheter and the bladder was irrigated. Rectal examination showed an enlargement of both lobes of the prostate. On June 7 he died of uremia without operation. No autopsy.

Case XVIII.—Urinary Sepsis; Hypertrophy of Prostate; No Operation; Death.

H. R., seventy-nine years old, was admitted on March 1, 1903. He was mentally and physically incapacitated from giving a clear history. It was ascertained that his illness had lasted about four months, during which time he required constant catheterization. Two days before admission he began to have severe pain in the hypogastrium which became more intense the day before admission. The patient was continually groaning and in a semicomatose condition, with general abdominal pains, most intense in the hypogastrium, and

DISEASES OF THE URETHRA.

Disease.	Operation.	Total.	Died.	Total, 1903.	Died, 1903.
Stricture	Urethrotomy, Internal	4	0	0	0
Stricture	Urethrotomy, External	15	1	5	1
Tumor of	Suprapubic Extirpation	1	0	0	0
Periurethral Abscess	Incision and Drainage	3	0	3	0
Phagedenic Chancre.	Urethrotomy, and Cauterization	1	0	1	0
		24	1	9	1

with a temperature of 100° F., pulse 126 and respirations 30. The man was evidently moribund and it was not considered wise to perform an operation of any kind. He died shortly after admission. Autopsy was refused.

The cause of death in the fatal case of external urethrotomy for stricture is made clear in the following history:

Case XIX.—Surgical Kidney; Stricture of the Urethra; Cystitis; Urinary Sepsis; External Urethrotomy and Death.

S. S., a German, aged sixty years, was admitted July 2, 1903. He had had gonorrhea many years before. Four years previous he had had an attack similar to the present one. About three weeks before admission there had been great frequency in urination by day as well as by night. The urine had been red in color and there was great pain during its passage. He was examined on July 4 when it was demonstrated that a No. 11 olivary bougie passed a stricture about four inches from the meatus, but it refused to pass through the entire stricture in the deep urethra. The following day there was a rise of temperature to 102.2° F.

On July 7 a rapid dilatation of the stricture in the penile portion was performed by Dr. Elsberg and an external urethrotomy for the deep stricture. At the end of the operation a 32 Fr. sound was passed into the bladder. The patient reacted well. July 15 the urethra was irrigated through a catheter and sounds up to 31 Fr. were passed. This was done in the morning. At 9 o'clock P.M. there was headache and dizziness and the bladder was found to be distended midway to the umbilicus. Attempts to pass urine voluntarily were ineffectual. A soft rubber catheter passed into the bladder through the perineal wound and 23 ounces of urine were withdrawn. It was of a foul odor, slightly blood-tinged and contained much stringy mucus. The bladder was now irrigated daily through the perineal wound with saline solution. On July 20 the patient urinated partly through the urethra and partly through the perineal wound and two days later there was a chill and a temperature rise to 103° F. From this time on there was a steadily increasing urinary sepsis with chills, rapid pulse and high temperature until August 17, when he died. The blood culture made before death demonstrated the presence of the bacterium coli. Autopsy was refused.

Case XX.—Phagedenic Chancre of Urethra; Incision and Cauterization; Cure.

S. L., thirty-seven years old, married, was admitted October 29, 1903. He had been operated upon for stricture five years before. He said he had had chancre twelve years before and had undergone treatment. There had been numerous attacks of gonorrhea. For two weeks before admission he had noticed swelling of the glans penis accompanied by a slight purulent discharge from the meatus. The discharge showed gonococci. There had been chills and fever. Constant and severe pain in glans penis. On admission it was seen that there was a considerable swelling of the mucous membrane of the urethra, the meatus pouting, an ulcerated area being visible on the roof of the urethra. The glans was glazed and exquisitely tender. A sore was also noted on the left side of the penis in the sulcus behind the glans and there was a painful and enlarged right inguinal gland. He was treated by urethral irrigations and dressings with ichthyol ointment but there was very little improvement.

On November 2, under nitrous oxide gas, the writer incised the urethra from the lower commissure of the meatus for about three-quarters of an inch backward, exposing the large intra-urethral sore. This was thoroughly cauterized with the Paquelin and dressed with iodoform gauze. A perineal urethrotomy for drainage was performed at the same time and a soft rubber catheter sutured in place, so that no urine passed through the urethra. After this there was considerable and rapid improvement and, on November 9 the perineal tube was removed. The wound in the penis seemed to be granulating. The patient passed almost all the urine through the urethra and was out of bed. On November 12, under local anesthesia, about three ounces of thick yellow pus were evacuated from the glands in the right inguinal region, a necrotic gland being, at the same time, withdrawn. The pathological report showed the presence of *Staphylococcus aureus.* About November 16 edema of the penis was practically gone and there was but a slight discharge from the abscess cavity. On November 19 the ulcer had apparently healed and the inguinal wound granulated. There had been for several days an acneform eruption of the face and limbs which was thought to be due to the iodoform. It became fairly characteristic of secondary syphilis, however, and so inunctions were begun. The patient was then discharged from the hospital but has continued under observation. He developed a very acute secondary syphilis and is still under treatment.

DISEASES OF THE PENIS.

Disease.	Operation.	Total.	Died.	Total, 1903.	Died, 1903.
Dermoid Cyst of Prepuce	Excision	1	0	0	0
Phimosis	Circumcision	1	0	0	0
Hypospadias	Meatotomy	3	0	1	0
Hypospadias	Urethroplasty	3	0	3	0
		8	0	4	0

Case XXI.—Hypospadias; Incision of Peno-scrotal Bridge; Improvement.

E. D., aged twenty-two years, was admitted to the hospital April 13, 1903, for a deformity of the penis following four operations for the relief of an hypospadias. The penis was bound down to the scrotum by a bridge of tissue which had been apparently made as a first step of the final plastic

MISCELLANEOUS. NO OPERATION.

Disease.	Total.	Died.	Total, 1903.	Died, 1903.
Gonorrhea	1	0	1	0
Pyuria	1	0	1	0
Genito-Urinary Tuberculosis (with advanced pulmonary tuberculosis.)	1	0	1	0
	3	0	3	0

operation. This bridge of tissue appeared to have been sewn to a piece of glans which lay below and a considerable distance from the main portion of the glans. On April 14 operation by the writer. The penis was freed by cutting this bridge and the meatus was forcibly dilated to No. 30 Fr. There was considerable improvement and the patient was discharged on May 13, passing a fair stream, and with the organ capable of performing sexual function.

DISEASES OF SCROTUM AND TESTES.

Disease.	Operation.	Total.	Died.	Total, 1903.	Died, 1903.
Varicocele	Extirpation	17	0	3	0
Varicocele	Ligation	1	0	0	0
Tuberculosis of globus minor.	Plastic for Sterility.	1	0	0	0
Tumor of Testis	Orchidectomy	4	1	0	0
Torsion of Testis	Orchidectomy	2	0	0	0
Tuberculosis of Testis	Orchidectomy	1	0	1	0
Suppuration of Testis	Orchidectomy	1	0	1	0
Abscess of Testis	Incision and drainage	1	0	0	0
Undescended Testis	Plastic on Epididymis	4	0	1	0
Tumor of Undescended Testicle	Exploratory Celiotomy	1	1	1	1
Hydrocele	Incision and drainage (Volkmann)	9	0	0	0
Hydrocele	Incision and Eversion (Winkelmann)	2	0	0	0
Hydrocele	Excision of tunica (Bergmann)	5	0	2	0
Hydrocele of Cord	Bassini's operation for hernia	1	0	0	0
Spermatocele	Excision	1	0	1	0
Spermatocele	Incision and drainage	1	0	1	0
Gangrene of Scrotum and Perineum from Ischiorectal Abscess	Incision and drainage	1	0	1	0
		53	2	12	1
Chronic Epididymitis	No operation	1	0	1	0
Gonorrheal Orchitis	No operation	1	0	1	0
Orchitis following Prostatectomy	No operation	1	0	1	0
		3	0	3	0

Case XXII.—Double Spermatocele; Excision of One Sac and Incision and Drainage of the Other.

Joseph G., forty-four years old, was admitted April 22, 1903. His history dated back nine or ten years. Both sides of the scrotum were occupied by several fluctuating painless masses, flat on percussion, with no impulse on coughing, and giving all the signs of fluid. The testes were below and behind and slightly tender. The right scrotum was more tense than the left. Each side was about four inches long and three inches in diameter. At operation by the writer on April 25, under nitrous oxide gas, the right sac was excised. On the left side a simple Volkmann operation was performed. The fluid examined at the time showed numerous non-motile spermatozoa. On the right side the spermatocele was in the tunica and the entire parietal portion was removed, the testicle replaced and the scrotum drained. There was no disturbance in healing on this side, but suppuration took place on the other side necessitating a second operation on May 12, when the enormously thickened tunica was removed with prompt recovery. On June 10 the patient was discharged cured.

Case XXIII.—Congenital Inguinal Hernia; Undescended Testis; Bassini and Plastic; Cure.

Louis S., aged thirteen years, was admitted November 11, 1902. He had been kicked in the left groin by a boy two months before. He had always had one inguinal testicle. After the injury a large elastic swelling developed, which was repeatedly tapped but rapidly refilled. On admission the right testicle was normal but the left one was found above the external ring which admitted the tip of the finger. In the scrotum and reaching to the testicle there was a rounded fusiform swelling, fluctuating and dull on percussion. On coughing a mass came out of the external ring which gave the impression that it was connected with the larger mass like the handle of a hammer.

Operation by the writer on November 15 under chloroform anesthesia. The testicle was found in the canal at about the level of the external ring. There was no true hernia, but the testicle acted as a valve shutting off the sac at the external ring. The sac was emptied of its fluid and the epididymis was separated from the testicle along its upper pole and lateral aspect, thus lengthening the cord for a distance of three-quarters of an inch, *i.e.*, lengthening the testicle itself. The remainder of the operation was completed after the Bassini method for the radical cure of an inguinal hernia and the external wound left open. There was some infection, but healing finally occurred by December 13 when the patient was discharged cured.

Case XXIV.—Cystic Sarcoma of Undescended

Testicle; Exploratory Laparotomy and Aspiration of Tumor; Death.

Albert N., forty-three years old, was admitted August 26, 1903. He had had a left inguinal hernia for many years. He had never noticed the presence of more than one testicle. He was married and his wife had had one child. Two years before admission he began to complain of constipation and pain in the lower extremities. He tired easily and, at the same time, he noticed that he was gradually losing weight. He thought he lost at least twenty pounds in one year. Three months before admission he had noticed a mass in the abdomen which he thought had not increased in size and had never been tender. There was no fever or chilly sensations; no jaundice, bowels constipated. The urine had been normal. Lately he had complained of constant pain in the right lower extremity. On examination an enormous mass was found occupying the entire abdomen except the epigastrium and left loin. The mass was felt to be as large as an adult head. It did not move during respiration and it was not tender. It seemed to fluctuate in its upper portion; its lower portion felt hard and nodular. The edge was palpable in the right lumbar region. The tumor was apparently quite movable.

On August 29 an exploratory laparotomy under nitrous oxide gas was performed by Dr. Wiener. The incision was made from the ensiform to the symphysis pubis, exposing the tumor which was apparently a gigantic testicle, epididymis and cord. The growth was as large as a football and the testicular portion was cystic. This was aspirated and about 20 ounces of thick, bloody fluid withdrawn. Enormous veins composed the cord which was intimately adherent to the bladder; this in turn being connected with the testicle by a large gelatinous mass. Posteriorly several large masses of glands could be palpated and the broad pedicle of the tumor could be felt passing backward to the right into the hollow of the sacrum. The case was considered inoperable and the patient's pulse becoming weak the abdomen was quickly closed with through and through sutures of silk. August 31, two days later, he died of exhaustion.

Post-mortem examination was made by Dr. Libman. A considerable amount of blood and fluid was found in the abdomen and, on the left side, a large ring and hernial sac which was reducible. The testicle on the left side was normal. A large tumor (whitish on section) was found in the center of the right half of the abdomen, partly cystic and partly solid. Continuous with it below was a tumor the size of a walnut and from this ran the tube—corresponding to the epididymis—to a triangular pouch resembling a uterus. From the left epididymis the tube ran to the triangular pouch. Both tubes had a lumen which admitted a fine probe and both were attached to the pelvic wall. Below the triangular structure tapered into a canal, which in turn ended in a pouch behind the prostate gland. The ejaculatory ducts communicated with the above pouch. There were no structures behind the bladder corresponding to the seminal vesicles. The kidneys showed chronic interstitial changes, congestion and cloudy swelling. The spleen was large, congested and soft. The adrenals were negative. The liver was cloudy and congested. The entire pelvis was filled by a mass of new growth, white and firm. Veins negative. Microscopically the growth proved to be a round-celled sarcoma.

766 Madison Avenue.

THE TRACHEAL TRACTION TEST AS AN AID IN THE RECOGNITION OF THE ASTHMATIC LUNG.

BY ALBERT ABRAMS, A.M., M.D.,
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THE facts concerning the variation in the percussion note when percussion is executed over the larynx and trachea and certain maneuvers adopted have been firmly established in medical literature. With the widely opened mouth, the percussion sound is louder and becomes increased in intensity; the latter being still further augmented if the tongue is protruded. What is referred to as Wintrich's change of note, is the variation in the pitch of the tympanitic tone, when percussion is executed over the larynx and trachea with open and closed mouth. Opening the mouth raises the pitch of the percussion tone whereas closure of the mouth lowers the pitch.

Baümler observed in many persons that when percussion of the chest is done in the recumbent posture, variation in the pitch of the percussion note remains uninfluenced owing to the fact that the root of the tongue is guided backward, thus more or less completely blocking the entrance into the larynx and in this way interfering with variations in the pitch of the percussion note, the result of opening and closing the mouth. Every act of deglutition lowers the tympanitic percussion sound over the larynx and trachea owing to the fact that in swallowing, the epiglottis covers the laryngeal orifice and narrows it. When the head is thrown forcibly backward, the tympanitic percussion sound is also lowered. Eichhorst[1] attributes the latter change in the percussion note to mechanical causes, assuming that in that posture of the head the vertebral column is arched forward, thus narrowing the pharyngeal space.

That Eichhorst's conception of the cause of the change of the percussion note is undoubtedly wrong, the writer hopes to prove. As far as his knowledge extends, no endeavor has been made to employ the preceding observations practically. Wintrich alone has made a feeble attempt in this direction. He concludes that if, after percussion of the larynx and trachea with open and closed mouth, no change in the percussion note is observable, a nasal obstruction of some kind must exist. The tracheal traction test as employed by the writer consists in percussing the manubrium sterni first with the chin

[1] Physikalische. Untersuchungsmethoden der inneren Krankheiten, 1881, p. 228.

approximating the sternum and then again when the neck is forcibly extended on the sternum. In the former instance, the percussion note is resonant, or even hyperresonant; in the latter posture it is dull or even flat. The alteration in the percussion tone consequent on the foregoing maneuvers is by no means confined to the manubrium sterni but extends to the lung areas on both sides of the latter. While the change already referred to, is not conspicuously palpable to the tyro over the lung contiguous to the manubrium sterni, it is invariably present over the latter area to a degree which is unmistakable.

The writer has for many years employed what he calls the tracheal traction test and finds it invariably present in health, modified of course in intensity by concomitant conditions which also influence other percussion sounds. It is likewise invariably present in all lung affections with the exception of bronchial asthma. In the last named disease, it is not only absent during an attack, but in the interparoxysmal period as well; that is to say, whether the neck is flexed or extended on the sternum, the percussion tone over the manubrium sterni is in no wise influenced but remains the same. The writer is further warranted in concluding from his personal observations that the absence of the tracheal traction test is peculiar to idiopathic bronchial asthma, having found it to be present in symptomatic asthma as in the varieties known as cardiac and uremic asthma. In other words, the tracheal traction test was found to be negative in idiopathic bronchial asthma and positive in asthma of symptomatic genesis. In an affection like emphysema where pulmonary resonance is but slightly influenced, if at all, by both phases of respiration, the tracheal traction test was found to be positive in all the cases examined by the writer. If, in a case of idiopathic asthma improvement is noted, it proceeds commensurately with restoration of the tracheal traction test.

How are we to explain the negative tracheal traction test in asthma? As previously remarked, Eichhorst attributes the change in the percussion note over the trachea when the head is thrown backward to a narrowing of the pharyngeal space by the forward arching of the vertebral column. Insomuch as this narrowing would occur in the asthmatic as well as in the normal subject, we must seek elsewhere for an explanation. Mere traction of the trachea itself cannot explain it for when this structure is removed from the cadaver and percussed after stretching, the percussion tone, instead of being lowered, in reality, raised in pitch. What is lacking in the dead is supplied in the living subject, viz., the tonus of the bronchial musculature. Whatever theory may be adopted in explanation of the asthmatic seizure, we have no reason to doubt the overwhelming evidence in favor of the spasmodic theory, a theory which implicates the bronchial musculature. Even the recent interesting observations of Bullowa and Kaplan[1] do not negative the spasmodic theory. These investigators would have us believe that insomuch as the hypodermic use of adrenalin chloride will abort an asthmatic paroxysm, the angioparetic theory of asthma is favored to the exclusion of the spasmodic theory.

Seven years ago in a paper entitled "A Contribution to the Study of Heretofore Undescribed Neuroses of the Lungs,"[1] I insisted on the necessity of hypothesizing the existence of two distinct functions of the vagus nerve, or the existence of different fibers with two distinct functions: fibers which can dilate (bronchodilator nerves) and fibers which contract (bronchoconstrictor nerves) the lungs upon application of the appropriate stimuli. What I had then deduced as the result of mere clinical observation seems recently to have been conclusively established by the experimental investigations of Dixon and Brodie,[2] which demonstrated that the bronchial muscles are innervated by two sets of fibers, constrictor and dilator sets, both of which run in the vagus. If we have two sets of nerve fibers, we must have two sets of muscular fibers; and that this is reasonably certain is evidenced by the discovery of Aufrecht.[3] The latter asserts that the belief of only a circular layer constituting the musculature of the bronchi is wrong, and that by using the Biondi-Heidenhain stain a longitudinal muscular layer is also found to exist. My discovery of the lung reflex of contraction[4] further supports this belief. The writer contends that the theory of asthma must not alone be based on a spasm of the circular fibers of the bronchi but on an inability of the weaker longitudinal fibers to expel residual air imprisoned by the circular fibers. In employing adrenalin chloride after the manner suggested by Bullowa and Kaplan, the writer, while noting a fugacious abortion of the asthmatic seizures, observed the very pertinent fact that coincident with the dissipation of the paroxysm, the lungs which were formerly hyperresonant became dull on percussion. He then experimented with other agents in the healthy and asthmatic subject and noted that a reliable preparation of ergot, employed hypodermatically, was quite as efficacious as adrenalin and that there was likewise a translation of the percussion sound from resonance to dulness.

There is a preparation largely employed in this country by asthmatics for aborting their attacks which is phenomenally efficacious. The preparation in question is nebulized and while it is supposed to reach the lower air passages, its action is practically confined to the nasal mucosa. Employed after this manner, even in healthy subjects, there is an immediate translation of the normal lung resonance to dulness or flatness; in other words, we induce a veritable lung reflex of contraction discharged through the nasal mucosa just as we can induce the lung reflex of dilatation or the heart reflex through the same medium.

[1] MEDICAL NEWS, Oct. 24, 1903.

[1] New York Medical Journal, June 13, 1896.
[2] Journal of Physiology, March, 1903.
[3] Deutsch. Archiv. f. klin. Med., Bd. lxvii, H. 5 and 6.
[4] American Medicine, June 3, 1903.

These facts suggest evidence more in favor of the spasmodic than the angioparetic theory of asthma. Four years ago[1] I suggested a method of inhibiting the action of the heart as an aid in diagnosis. For clinical purposes, inhibition of the heart is best attained by voluntary contraction of the muscles of the neck. In some susceptible subjects, mere stretching of the neck suffices to inhibit the movements of the heart, a maneuver which stimulates the vagus, the inhibitory nerve of the heart.

The writer assumes that in applying the tracheal traction test a positive reaction denotes contraction of the bronchial muscle consequent on stimulation of the vagus. We can no longer deny the existence of the bronchial muscle, nor its innervation from the pneumogastric nerve. In the large bronchi and trachea, the muscular coat is well developed and in the trachea its contraction may cause considerable narrowing of the tube owing to the incomplete cartilages. The experiments of Riegel, Edinger and others prove conclusively that the bronchial muscle can be brought to contraction by stimulation of the vagus. In explanation of the dull sound supplanting resonance in the normal subject by tracheal traction, it is reasonable to suppose that owing to contraction of the bronchial muscle, the air in the trachea and bronchi is under considerable tension, the pitch becomes higher and the volume and intensity so decrease that, while percussion formerly yielded resonance, the same act now yields a dull or even flat sound. The negative results obtained in idiopathic asthma in the application of the tracheal traction test warrant the conclusion that in this disease, the tonicity of the bronchial muscle is so reduced that it no longer responds to stimulation of the vagus such as is produced when the head is thrown forcibly backward. The following conclusions may be formulated:

1. When the head is thrown forcibly backward, the normal resonance obtained by percussion over the manubrium and lungs contiguous thereto becomes converted into a dull or flat sound. This maneuver the writer has called the tracheal traction test.

2. The tracheal traction test is positive in health and in all cardiopulmonary affections, but it is negative in cases of idiopathic asthma.

3. The recognition of this test affords a valuable aid in the diagnosis of idiopathic asthma and assists in its differentiation from symptomatic asthma and other spasmodic pulmonary affections which suggest an asthmatic genesis.

4. The maneuver specified as tracheal traction evokes contraction of the bronchial muscle by stimulation of the pneumogastric nerves.

5. In asthma the tone of the bronchial muscle is so reduced that it no longer responds to vagus stimulation brought about when the neck is forcibly extended on the sternum; hence the tracheal traction test in idiopathic asthma is negative.

[1] Transactions of the Medical Society of the State of California, 1900.

ACUTE THYROIDISM FOLLOWING CURETTAGE.[1]

BY BROOKS H. WELLS, M.D.,
OF NEW YORK.

SINCE the time when the Roman matron measured with silken ribbon the throat of the bride before and the day after marriage, to determine by its rounded increase that she had been a pure virgin, the sympathetic relation of the thyroid gland to the pelvic organs has been vaguely known; but hardly more than a decade has passed since we began to appreciate the various facts that will in time lead to an accurate knowledge of the functions and physiology of this and the other ductless glands.

Under certain conditions there occurs in those individuals who have been the subjects of a thyroid tachycardia a virulent acute toxemia characterized by a well marked group of symptoms. This toxemia may follow operations upon the thyroid itself, operations upon the pelvic organs, or, more rarely, operations upon the breast or other parts of the body, or any marked nervous strain.

The exact mechanism by which the symptoms are produced or by which the function of the gland is disturbed or excited is not definitely known. The disturbances after operations on the thyroid itself have been attributed to an outpouring of toxic material into the blood, either as the result of the manipulation to which the gland is subjected or from a leakage and absorption from its cut surfaces. These causative factors can be ruled out when the thyroidismus follows operations on other parts of the body. In cases similar to the one recorded below it seems certain that the condition is the result of a reflex disturbance of the central nervous centers and the sympathetic centres that control the activity of the thyroid gland, or, as has recently been suggested, of the parathyroids. The condition is often rapidly fatal, death occurring within the first three or four days from cardiac exhaustion. When recovery ensues the symptoms rapidly or gradually disappear until the individual reaches the status present before the attack.

The following case of acute toxemia with the so-called thyroid symptoms following curettage seems to the writer to posses features of interest which make it worthy of record:

Mrs. X., aged fifty-three years, was referred to me on November 3 by Dr. A. I. Miller, of Brattleboro, Vt. She had passed the menopause at the usual time, but for the last six months had had repeated small bleedings from the uterus, which was not enlarged and was freely movable. The patient was nervous, thin, and poorly nourished. She had had for many years a slight enlargement of the right lobe of the thyroid, an excitable rapid pulse, slight tremor, no protrusion of the eyeballs. Auscultation of the chest revealed a few bronchial râles. No other pathological condition was discovered. To exclude the possibility of beginning cancer of the fundus uteri as a cause

[1] Read before City Hospital Alumni Association.

for the postclimacteric bleeding a curettage of the uterus was advised. This was done at Miss Alston's Sanitarium, with strict asepsis on November 5 at 10 A.M. The scrapings from the endometrium were examined by Dr. Jeffries, pathologist at the Polyclinic, who reported that they showed only a moderate grade of endometritis. There were no further symptoms local or general that could be referred directly to the curettage.

The anesthetic was given by Dr. Bennett and was, as usual, gas followed by ether. After a few breaths of ether the heart became so rapid that Dr. Bennett considered it wise to change to chloroform, under which the heart beats became slower. The time from the beginning of the anesthetic to the return to consciousness was a little less than a half hour.

Six hours later the patient was flushed, tremulous, nervous, voluble, but not worried and with mind clear. The pulse had risen to 130 and became more rapid on any little excitement. Temperature was 100.5° F.

Twenty-four hours after the operation the flush, tremor, nervousness and volubility were increased; the pulse had risen to 178 and was at times uncountable; the temperature was 99.5° F.; there was profuse sweating, a watery diarrhea, marked irritability of the bladder with polyuria, many soft râles all over the chest, and vomiting. The thyroid was perceptibly enlarged, especially on the right side, and presented a quite apparent thrill. There was marked throbbing of the heart and large arteries. Examination of the urine showed a sour odor, reaction neutral, sp. gr. 1,012, no albumin, no casts, innumerable colon bacilli, and a few pus cells. These symptoms of an extreme toxemia continued to the end of the first week, when the temperature reached 101.6° F. and the auscultatory symptoms of bronchitis became more marked, though there was but little cough and expectoration. Blood examination at this time showed no leucocytosis and no typhoid reaction.

On the tenth day the temperature reached 104.8° F. with a pulse of 148. On the eleventh the bronchial symptoms began to subside and in a few days became insignificant.

From the fifteenth to the twenty-fourth day the patient's condition was such that death was expected at any time. The toxic symptoms continued, the tongue became dry and brown, there was extreme weakness, and the usual relation between temperature and pulse was reversed so that the heart action was most rapid and weak when the temperature was lowest.

The diarrhea ceased to be troublesome on the twenty-first day and on the twenty-fourth the patient was able to take small amounts of solid food by mouth. From this time on improvement was steady but slow, until the patient reached a condition approximating that before the operation.

Treatment.—At the beginning it was thought that some of the symptoms might be dependent on an intestinal toxemia and the patient was given calomel followed by a saline and repeated high colonic flushings. The bladder for several days was washed out with a boric acid solution at eight hour intervals, the washing being followed by the injection and retention of two ounces of a 10 per cent. argyrol solution. The diarrhea was finally controlled by tannigen by mouth, gr. x every three to six hours as needed, and starch and deod. tr. opium, m.x. by rectum every six to eight hours. The insomnia was relieved by opium and trional by enema at night, in doses of from xx grs. at first, down to v gr. at a later period. As it became impossible to make the patient retain food given by mouth, rectal alimentation was employed more or less from the eleventh day to the twenty-second. Beef juice and white of egg were the foods best retained and digested by the stomach. Solid food in small amounts was begun on the twenty-fourth day. The heart action and general condition were not benefited by any drug; colonic flushing, strychnine, digitalis, belladonna, suprarenalin, alcohol, all seeming to do more harm than good.

Since writing the above the author has received the reprint of a most interesting paper by Dr. Farquhar Curtis, entitled "Thyroidectomy and Sympathectomy for Exophthalmic Goiter," in which he reports several fatal cases of acute thyroidism and discusses the danger of thyroid poisoning in operations upon persons with exophthalmic goiter. Curtis notes the same symptoms seen in the author's case, the same uselessness of drugs in controlling the excited heart action, and the rarity of recovery when serious symptoms appear. In nearly all of his cases the temperature was high, but with the rise of temperature there was no leucocytosis. In each of the five fatal cases recorded a trace of albumin and granular casts were present in the urine after the onset of the toxemia. In the case noted above there were no traces of albumin or casts until the third week and then a few small hyaline casts and a trace of albumin were present for a few days.

A NEW SLIDE BOX; ALSO A METHOD OF RECORDING EMBEDDED TISSUE.

BY WILLIAM RUSH DUNTON, JR., M.D.,
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ASSISTANT PHYSICIAN SHEPPARD AND ENOCH PRATT HOSPITAL.

IN the *American Journal of the Medical Sciences* for May, 1902, Miss Mary Kirkbride described a slide cabinet, devised by her brother, the late Dr. Thomas S. Kirkbride. Briefly described, it was the application of the card index principle to slide storage, and consisted of a case or shell holding a number of drawers which are made of such size as to hold slides in an upright position when the drawer lies flat on the table, where they can be handled as one does a card index. This shell is inclined at an angle of 75 degrees. The back of each drawer is made at a complementary angle so that the slides lie flat when the drawer is in the case. The advantages of this cabinet are

numerous, chief among them being compactness and the fact that the slides are self-indexed.

After purchasing and using one of these cabinets we were still enthusiastic about them, but had two strong points of criticism, the first being that a number of slides could not be filed as they were too broad, and therefore did not move freely in the drawers. This is a serious drawback as it prevents filing slides in their proper relative position, and when the slide is one of a series the trouble is still more irritating. The other point of criticism is that the cabinets are too expensive. They are most beautifully made, which accounts for the high price ($25) at which they are sold. They are built of 12 drawers, each holding 100 thin slides, so that we pay over two cents storage for each slide in the cabinet. Miss Kirkbride estimates the containing capacity of the cabinet at 1320, which brings the cost below two cents, but even this is an abnormally high price to pay for slide storage. In a laboratory where a certain lot of slides are in constant use the Kirkbride cabinet is most excellent, but as soon as the number of slides becomes large, and they are not in constant use, then the cost becomes excessive.

The principle of the cabinet is so very convenient that Dr. Brush and I experimented to devise a slide box which would preserve the same principle of slide filing, and yet would be about as cheap as the ordinary slide boxes on the market. The result of our experiments has been that we have settled on the box described below.

The boxes are in form essentially similar to the drawers in the Kirkbride cabinet. They are made of one-quarter inch poplar. The outside dimensions are, top 10 1/16 by 1 9/16 inches, the bottom 8 10/16 by 1 9/16 inches, height 4 inches. The lateral view shows a trapezoid, one end being at an angle of 75 degrees. It is on this end that the box rests, when not in use. With lid removed the height of the box is 2½ inches, giving ample room for manipulation of the slides. The lid is

A B C D

A. Shows side view of box. *B.* Shows boxes as they appear when on shelf and not in use. *C.* Shows how slides lie in box when not in use. *D.* Shows box in use. When the box is filled with slides the movable wooden piece is dispensed with.

retained in place by a hook on the "straight" end, the angle at which the inside cleat is placed retaining the other end. The inside width of the box is 1 1/16 inches, giving ample room for slides even when slightly broader than their supposed measurement of one inch. A piece of wood three inches by seven-eighths inch with a brass spring at its side is used to retain the slide in position when the box is not full. Guide cards which stand one-quarter of an inch higher than the slides are used to separate the different groups or series of slides. Each box holds 115 thin slides. A label is placed on the lid and the boxes placed on shelves like books, and a particular box can be readily found and removed without disturbing the others.

To file slides in these boxes it is necessary that a bristol board label be glued upon each end of the slide as described by Miss Kirkbride in the article above quoted. We have found that, if labels of unequal size are used, when the slides are stacked, the curl or warp of the larger label being greater than the smaller one, slides do not lie flat as is desired. We therefore use the same size label on each end of the slide with satisfactory results. These labels are cut from cardboard .5 mm. thick and measures 12 mm. x 24 mm. On the upper card is placed the name or case number, the tissue and date; on the lower the staining method or such other memoranda as are desired. In lettering one should remember that the slide stands vertically when the label is read. The cost of these boxes was 16 cents each made in 200 lots. The cost could probably be reduced by two cents if 1,000 were made at one time.

In the first lot of boxes which were made for us a large number had to be rejected, as the maker had not been careful in his measurements and had made them too narrow, so that it was impossible to use them for slides 25 mm. wide, which is the narrowest slide in use. The slides which we have vary from 25 mm. to 26.5 mm. and at least a millimeter should be allowed for free play. Care should be taken to have the boxes made of thoroughly dried wood as shrinking may further narrow the box. One should be careful to avoid falling into the opposite error of making the boxes too wide, as the slides will not lie well if there is too much side play.

For a number of years there has been in use at the laboratory of the Sheppard and Enoch Pratt Hospital a method of recording the tissues embedded for section cutting which has been found to be convenient and practical.

A register of all tissue is kept in a book with vertical columns which are headed according to the various media employed in the method used; and in these columns, on the line devoted to the special piece of tissue in question, is noted the date and time of its being placed in any particular medium. Each method of fixation, also certain special methods of preparing tissue, for example, the Marchi method, is denoted by letter. Tissue from autopsies made at the hospital have the autopsy number prefixed to this letter, and in addition a regular number denoting its sequence in the fixation method. This prefix number is not given to tissues derived from any other source, as that sent in from outside, or from experiments made on animals. The numbers are given consecutively to tissues in the sequence in which they are placed in the fixation methods employed; for

example, A53, and if from a case dying in the hospital, 14A 53, the autopsy number being prefixed.

Other parts of the brain, or other organs, have additional numbers added; for example, the optic chiasm might be 14A 53.1, and the right kidney 14A 53.2. While the kidney or other organs perhaps should have other numbers to differentiate them from nervous tissue, it has been found that it is less complicated that all organs from the one case fixed by the same method should have a common fixation number, and be differentiated by the added number. It may be said in criticism that the autopsy number is sufficient for this purpose; but it must be remembered that a good deal of tissue is handled which does not come from the hospital autopsies, and with these no autopsy or prefixing number is used. The autopsy number serves to more easily identify all tissues belonging to the same case no matter how fixed. It is obviously impossible to give the same fixation number to all tissues belonging to the same case when fixed by different methods as it would make confusion in those methods which are used infrequently.

1901.		Formalin.	Washed.	Muller's.	Washed.	70 Per Cent. Alcohol.	80 Per Cent. Alcohol.	95 Per Cent. Alcohol.	Absolute Alcohol.	Absolute and Ether.	Thin Celloidin.	Thick Celloidin.	Mounted.	Remarks.
8A37.10	Liver.....	7–8 12 M.				7–23 4 P.M.	7–25 10 A.M.	7–27 2 P.M.	7–29 9 A.M.	7–30 9 A.M.	8–1 9 A.M.	8–3 3 P.M.	8–6	
37.11	Spleen.....	"				"	"	"	"	"	"	"	"	
9A38.	Brain.....	9–15 12 M.												Miss Blank.
" 38.1	Right Lung...	"	9–27			9–27	9–29	10–1	10–3	10–4	10–6	10–10	10–12	
" 38.2	Ing. Gland....	"	"			"	"	"	"	"	"	"	"	
" 38.3	Pancreas.....	"	"			"	"	"	"	"	"	"	"	
" 38.4	Right Kidney. etc.	"	"			"	"	"	"	"	"	"	"	

At autopsies it is our custom to have two large jars containing Zenker's fluid labeled respectively *right* and *left*. Into these are placed the tissues from the organs of the right and left sides of the body, whose character can be easily recognized by inspection. After being taken to the laboratory the contents of each jar are entered in the book, the numbers given in order, and on the first line is noted the time of placing the tissue in solution, ditto marks serving to show the time of fixation of all the other tissues. The jar is then labeled with the tissue numbers and requires no further labeling until the tissues are mounted and the number written on the fiber block, as is the usual custom. Each change of fluid is noted in the appropriate column by the date, and the time when this last is considered necessary. It will thus be seen that we have a very convenient method of keeping record of tissue being prepared for mounting, and this record being permanent we can at once refer to it when any question arises as to the preparation of any section. A glance at the accompanying diagram will perhaps make this a little more clear to the reader. Here a check mark denotes that the tissue has been cut, and a cross, that the block has been thrown away.

In labeling our slides we use two bristol board labels, one on each end of the slide so that they may be stacked in the boxes described above, On the one is written the tissue number, the name of the tissue, and date of staining. On the other label is placed the name of the staining method, or any other data which we desire to record on the slide. With our system of numbering we are of the opinion that we have a maximum of information with a minimum of writing. Our plan has had a thorough trial and has worked most successfully for a number of years, so that it is now published with the hope that it may prove as useful to others as it has proved to us.

MEDICAL PROGRESS.

SURGERY.

Common Duct Stone and Septic Cholangitis.—While it is generally recognized that jaundice and pain are the commonest and often the only symptoms indicating the presence of a stone in the common bile duct, it is not as well recognized that a certain small number of these cases present, in addition, chills, fever and sweating so characteristically intermittent in character as strongly to suggest a malarial infection. G. E. BREWER (Med. Rec., Feb. 20, 1904) reports three cases of this type illustrative of different degrees of severity. He points out that considerable difference of opinion has existed in the past regarding the etiology of these septic symptoms, some holding that the febrile crises were due to bile absorption through abrasions in the duct mucous membrane produced by the foreign body, while others regarded them as nervous in character and similar to some of the varieties of urethral fever. Most recent observers, however, believe them to be due to septic absorption from infection of the duct, a true infectious cholangitis. Neglected cases coming to autopsy seem to prove this, for the duct is hypertrophied and thickened, the liver the seat of multiple abscesses, and the bile changed in appearance by the presence of pus and blood. The only treatment that can hold out any hope of permanent relief is surgical, choledochotomy, removal of the stones, and hepaticus drainage. The cases reported illustrate how the condition may vary from a scarcely

demonstrable inflammation of the mucous membrane of duct to a chronically thickened wall with surrounding inflammatory tissues, a duct filled with pus, blood and bile, and an enlarged, tender liver. If operation is done early the recovery is usually assured, but if neglected they usually suffer greatly and finally die from a combination of exhaustion, sepsis, and cholemia. In practically all cases the stone is a movable one, and the complete obstruction to the flow of bile to the intestine is due to the swelling of the mucous membrane, evidenced by the fact that bile may be absent from the stools for days after the removal of the stone. This fact emphasizes the necessity of hepaticus drainage in all cases.

Unavoidable External Esophagotomy for the Extraction of a Foreign Body.—The greatest number of foreign bodies that become lodged in the esophagus are either expelled through the mouth or propelled downward into the stomach; this is accomplished either by Nature herself or with the assistance of the surgeon. It is only when it becomes impossible to push the body up or down, for some reason or other, that an external section of the esophagus is called for. BARATYNSKY (Roussky Vrach, No. 12, 1904) reports the case of an insane patient who was admitted with pain in the neck and inability to swallow. According to the nurse the patient had swallowed on the morning of the same day a large stone which the author was unable to dislodge either one way or another. Under chloroform the operator succeeded in extracting through an incision 7 cm. long a stone of roundish irregular form 24 grams by weight. The patient made a complete recovery. The symptoms of this condition are not always clear enough to indicate surgical interference, and Trosseau's sound is often of great value in determining the nature of the body, the depth of where it is lodged and so on. No less important is investigation with the X-rays, which gives good results in the majority of the cases; next to this in diagnosticating the condition is esophagoscopy. In cases where the foreign body has sharp edges or produces considerable hemorrhage immediate esophagotomy is indicated, especially where there are also present inflammatory infiltrations about the neck. As regards the operation itself the anatomy of the parts renders it comparatively easy in early cases. The condition becomes, however, obscure in cases in which inflammatory processes induce considerable disturbance in the anatomical relations of the surrounding structures; the technic of the operation then becomes complicated. The patient may be given liquid food per mouth soon after the operation. The mortality of the operation is variously estimated by various authors and ranges between 20 per cent. and 21 per cent. The earlier the operation the more favorable the result; this, in unfavorable cases, is due chiefly to ulcerations, perforations with attendant purulent foci, hemorrhage, general marasmus, etc.

Chronic Appendicitis.—A discussion on this subject was recently held before the Surgical Society at Paris by GUINARD and LEGARS (Gazz. d. Osped., April 7, 1904) summarizes the following important points: (1) The frequency of unrecognized cases of appendicitis; (2) the frequent coexistence of appendicitis with other diseases of the abdominal organs, when the pain present at the time is almost always of appendicular origin; (3) the necessity for an examination of the appendix in every laparotomy and the extirpation of the same whenever in doubt as to its condition. The authors go even further and extirpate the appendix in every laparotomy that they are called upon to perform. If this procedure, according to them, would have been adopted by them before, they might have saved the life of a woman who succumbed to perforating appendicitis six months after she had been operated on for a uterine fibroma. As regards the frequency of unrecognized cases of appendicitis they report the case of a young girl who had suffered for a long time, and especially so during her menstrual periods, from pains, and in whom there could be detected some tenderness in the right iliac region around the appendicular site. The appendix was found diseased and with its removal the pains ceased. In another girl in whom the pains recurred only during menstruation they disappeared after the extirpation of a diseased appendix. The term appendicalgia should only be applied to cases of appendicular pain in which no organic lesion of the organ can be detected with certainty. In the hysterical there occur painful ovarian areas which simulate very much pains of true appendicitis. It must, however, be remembered that pain is not the principal symptom of appendicitis, for on one hand we do not know the cause of pain in appendicitis, and on the other hand there are many determining factors of pain at McBurney's point. The authors have especially observed this painful area in cases of stercoral typhlitis in whom an evacuation of the intestines causes an immediate disappearance of the painful spot, and they even observed a similar occurrence in a case of pneumonia. They also referred to an appendectomy in the early stage of typhoid fever under the impression that the pain in the right iliac region, complained of by the patient, was referable to a lesion in the appendix.

NEUROLOGY AND PSYCHIATRY.

Are Nervous Diseases Increasing?—Many writers state on apparently the highest authority that nervous diseases, more particularly those of a mental nature, are rampantly increasing. JOHN M. RHODES (Brit. Med. Jour., March 12, 1904) reports that the rise from 87,000 to 116,000 in the number of certified insane is a grave question for all. There are probably two factors which have not been adequately considered in the explanations attempted. The first is that undoubtedly in the last twenty years there has been a marked change in the attitude of the public to the institutional treatment of sick friends and relatives. This has been most thoroughly demonstrated in the case of infectious disease such as tuberculosis, and a glance at the increase in the sanitaria both in Europe and America, show that those families having the burden of insane members upon them have not been any less anxious to accept sanitarium treatment than in the case of patients suffering from infectious diseases. Not alone has this been due to the increased intelligence and the decreased opposition of the layman to the public treatment of his insane, but to the fact that he has been obliged by the segregation movement of the last twenty-five years, to dwell in small quarters in huddled tenements. This factor has probably counted more than any other in stopping the home treatment of the insane and must be considered when interpretation of the records of such towns as London, Manchester, New York and Chicago are undertaken.

Tetany in Colitis and Phthisis.—Tetany and mucomembranous colitis are both somewhat rare and the occurrence of each in a tuberculous case at the same time is interesting. H. H. THOMSON (Brit. Med. Jour., March 12, 1904) gives the history of a young woman aged twenty-one years, who was recently brought into the sanitarium of which he is resident physician. Her condition on admission was good. During the first three months she gained 17 pounds. She gradually began to complain of pain after eating, and constipation became extremely marked. At this moment, a sudden change took place in the disposition of the girl. From being happy and contented, she became irritable and hysterical and tremors gradually developed. The stools

at the time became soft and slimy, were occasionally streaked with blood and developed the typical signs of membranous colitis. The shreds did not ever exceed four inches in length. The temperature had slowly risen, but it scarcely reached 102° F. From this time on she improved and was virtually convalescent, when, suddenly, without warning, after a severe cramp, considerable blood was passed by rectum. Immediately after this flow, she had a severe and characteristic attack of tetany. She was for a time inarticulate. Finally she was able to say: "I cannot open my hands." The thumbs were flexed and pressed tightly into the palms, the fingers flexed at the metacarpophalangeal joints, while extended at the terminal joints. The hands were flexed at the wrists and the arms were crossed on the chest. The feet were arched and extended. The lips were pursed as though attempting to whistle. The face was pale, the extremities cold, the pulse feeble. There were but two severe attacks, the second occurring three hours after the first. The attacks were controlled by hypnotics and after a large amount of mucomembranous material had been passed, the patient gradually recovered. The relationship between a characteristic paroxysm of tetany with a form of colitis, which is now regarded as a neurosis, presents an interesting clinical picture.

Differential Diagnosis of Extra and Intraspinal Tumors.—Very few domains of medicine are beset with such difficulties as the diagnosis of spinal tumors. The proper analysis of the case is often rendered impossible by indolence or clouded intelligence on part of patients. According to V. MALAISE (Deutsch. Arch. f. klin. Med., Vol. 80, Nos. 1 and 2) the variety of tumor may give some clue as to its position. Thus, if a carcinoma is diagnosed from metastasis in the periphery or in the internal organs, the tumor is almost always extraspinal. The rule does not hold so strictly for sarcomata, since a few intramedullary tumors of this type have been reported. Syphilitic or tuberculous granulomata may occur in either place, but echinococcus cysts are generally outside of the spine. The presence of albumose in the urine generally speaks for a bone-tumor while in sarcoma, cytodiagnosis of the cerebrospinal fluid may aid. Radiography is of value where the growth is situated in the vertebral column but is unreliable if in the meninges. Intramedullary gliomata are often accompanied by internal hydrocephalus and tumors occurring with spina bifida are generally extraspinal ligomata. There are no symptoms which definitely determine the position, and one must be guided by their succession, duration and time of appearance, with extramedullary neoplasms, the first sign of which is usually pain; with an intraspinal position this is absent at first, unless the location is close to the surface of the spine, near the posterior roots. In the few exceptions to this rule, the pain was different; that is, it did not persist for months and years as the only symptom. Later in the course, spinal tumors may also cause pain, but this is generally situated in the periphery, over a large portion of the body, since due to irritation of intraspinal fibers. The most pain is experienced in tumors of the bone, the least in gliomata of the cord or tumors situated in the anterior portions of the cord. An angular kyphosis will speak for caries or carcinoma of the bone, while a round kyphosis occurs both with extra and intramedullary growths. Another valuable sign of the latter is dissociated anesthesia, such as loss of temperature and pain sense with preservation of tactile and muscle sense. In case of gliosis, this will be homolateral, while, if the result of compression, it will be observed in the opposite limb. Irritation of motor nerves and motor paralysis, especially if a large number of anterior roots are involved in a short time, is more common with extramedullary position. The distribution of symptoms is also of value; thus in meningeal tumors it is generally unilateral, less so in bone tumors and quite exceptionally in spinal growths. Brown-Séquard paralysis is thus seen most often with the first-mentioned variety. Owing to the fact that inflammation and hemorrhage is common within the spine, the course is often not so gradual and progressive as without the spine, and the most unexpected symptoms may appear suddenly during any stage of the disease. Temporary improvement is also seen sometimes, though complete destruction of a sensory nerve by a growth external to the spine, may also tend to alleviate the patient's suffering.

THERAPEUTICS.

The Chlorine Technic.—The acetic chlorine solution has thus far met every demand made upon it. Although planned solely as an aid in obstetrics, DOUGLAS H. STEWART (Am. Jour. of Obst., January, 1904) finds that it has strongly appealed to surgeons. After much thought upon this subject and several thousand culture tests covering more than twenty methods of hand sterilization, the author believes that acetic acid is the very best disinfectant; two teaspoonfuls being combined with four of calcinated lime and one quart of cool (70° F.) sterile water. Five minutes' scrubbing with this after five minutes of mechanical cleansing, has always prevented the growth of streptococci, staphylococci and *Bacillus coli communis*, after the hands were intentionally contaminated with those germs in pure culture. It suffices to say only that in practice it is a good rule to consider the antiseptic power equal to 1-500 corrosive sublimate. Chlorine does not escape from the acetic solution very readily, since the acetic acid and lime form a hypochlorous acid. As this is one of the surest bleachers, antizymotics and antiseptics known, it would be most natural to use it in its own proper form were it not for the unfortunate fact that it can only be preserved on ice or in a refrigerator. All germs on the vulva will be destroyed if the solution be used in half strength. Let the solution dry as it will. About one in 15 cultures will take after the washing. In 18 attempts after three washings one hour apart, all were negative. It is a simple matter to remove the objectionable odor of chlorine by washing the hands with a solution of two tablespoonfuls of acetic acid in water.

New Methods of Phototherapy.—In a recent publication Dreyer, of Copenhagen, reported some interesting experiments in connection with the eosin stains when combined with the Finsen light. He found that the addition of a very small amount of erythrosin to the culture media of bacteria caused a very much greater sensitiveness on their part to the yellow and green rays which were otherwise ineffective. The action may take place through a thick layer of skin and he recommended the injections of sterile solutions of this fluid by the Schleich method in order to render the deeper tissues accessible to the Finsen rays. NEISSER and HALBERSTÄDTER (Deut. med. Woch., Feb. 25, 1904) have lately made some practical experiments with this procedure. They treated 25 cases of lupus, scrofuloderma, tuberculous lymph glands and skin cancer. A solution (0.1 to 1 per cent.) of erythrosin in sterile (85 per cent.) salt solution was injected as deep as the effect was desired. In from two to five hours later the Finsen light was applied for fifteen to twenty minutes or longer in the case of a carcinoma. The authors' experience fully confirm the claims made by Dreyer and with it the Finsen rays may be made to penetrate depths never before reached.

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FOOD SUBSTITUTION.

DIETARY substitution, and the pernicious habit of giving "something just as good" for human nature's daily food, seem just now to be peculiarly rampant on both sides of the Atlantic. Our British cousins, however, appear to have gotten the best of us, as their cat transactions are reported to be conducted at London in rather a wholesale manner, while as yet we are still doing a small retail business, with the balance of trade decidedly in their favor.

The attention of the London police was first called to the matter by the proprietor of a boarding house, who applied to a magistrate for a writ of ejectment against an Italian tenant, on the grounds that he killed and ate cats. As it was discovered, however, that the English law does not recognize such gastronomic eccentricities as a sufficient justification for the summary dispossession of a tenant who pays his rent, the matter was taken up, according to the *Post*, by the Society for the Prevention of Cruelty to Animals. For several nights a dozen or more of its most skilful agents have been stalking the Squares of Bloomsbury, where the cat purveyors are reported to be doing their hunting, in the hope of catching them red-handed. Thus far, however, they have not succeeded, as either the wily Italians have let *I dare not* wait upon *I would*—like the poor cat i' the adage, or, as an official of the Society rather naïvely explains, it is "a difficult matter to prove the guilt of men who swallow the evidence of their crimes."

In addition to this, the Society for the Protection of Stray and Homeless Cats, of which Her Grace the Duchess of Bedford is president, has enlisted a large force of amateur detectives in the pursuit, by offering a substantial reward for the arrest and conviction of these ruthless foes of Tom and Tabby; while Russell Square and Guilford Street are filled with an army, built on the Sherlock Holmes plan, the pay of which would be sufficient, as Pope says, to endow a college or a cat.

Up to the present time, however, Her Grace seems to have elicited nothing farther than the statement of an Anglo-Italian authority, that while cats are considered to be a great delicacy in Italy, the State forbids their sale as food and on that account they are furnished as rabbits by the butchers. "They are," he says, "bought as rabbits and eaten as cats, and the proper way to cook them is to roast them in an oven, until brown, with onions, bay leaves and parsley, red wine and herbs. They are not nearly so good when boiled. Nor can English-bred cats be compared with Italian cats. The latter are much better cared for and are fed on the best of milk."

All England is taking part in (the discussion, though London is now the storm center, while in the United States, Pennsylvania seems to be in the area of the greatest depression, for if the expression "cats and dogs" is suggestive of a rainstorm, that of cats and rabbits will prove reminiscent of a cyclone, at least to the inhabitants of Ebensburg. For a boarding-house keeper in the "little Italy" of that quaint old town, finding that his guests were growing weary of risotto and spaghetti, made up his mind to try a change in his bill of fare so as to widen the horizon of his commissariat.

Now the Italian mind is a clear mind, and one that is, in the end, apt to achieve results. Its methods, however, are tortuous rather than direct, which makes it more adaptable to the requirements of diplomacy than to the necessities of hotel keeping. So this Latin boniface, instead of seeking his game in the open market, made a playful wager with his friend, one F. Benson, of Barnsboro, that the latter could not shoot a rab-

bit. No marksman cares to have his skill impugned, so Mr. Benson, having been successfully nagged up to the shooting point, departed, leaving this diplomatist to make the preparations to cook his hare, even though it had not yet been caught. But our modern Machiavelli knew men, if he did not rabbits, and the watched pot was boiling when Benson returned with what he called "a fine large cotton-tail." Not only had the thoughtful nimrod shot the beast, but he had skinned it too, so that the feast was ready at the appointed hour.

As to the enjoyment of the partakers, there can be no question, for they, one and all, declared that it was a dish fit to be set not only before an ordinary every-day kind of a king, but was worthy of even Victor Emmanuel himself. "Viva Garibaldi!" sang the chorus, and there was a sound of revelry by night, interspersed with the twanging of guitars and the strident tones of the street piano. But this is a world of sharp and abrupt contrasts, and there was no gleam of light in the windows of a neighboring house, to show the expectant faces pressed against the darkened panes. For the mice were all that played in that bereaved home, and the missing cat did not come back.

How the substitution was discovered we cannot say. Perhaps the baited hunter, proud of his prowess and the nine lives that had been snuffed out at a single shot, grew boastful and confided to his wife, that he, like care, had killed the cat. Or it may be that he met a bunny in a lonely spot, and having read the recent descriptions of the audacious courage and aggressive ferocity of Brer Rabbit, he feared to tackle him alone. He might miss him, or slightly wound him, and then be at his mercy. For rabbits, they say now, have more courage and less discretion than Mississippi bears.

But, be this as it may, the cat was fairly out the bag, and his poor garlic-tinctured bones were picked over in hot anger by the quondam friends. Benson demanded payment of the bet, and when this was repudiated he took the chances of the Mafia's wrath, by playful but indiscreet allusions to "a d——d Eye-talian cat-meat man." But even if he escapes the vengeance of the Carbonari and the terrors of the evil eye, his dream of future peace is ended. For no one kills a cat unscathed, and his guilty conscience in its troubled sleep will dream "of journeys to St. Ives."

"Let Hercules himself do what he may
The cat will mew—the dog will have his day."

NON-MALIGNANT NEOPLASMS OF THE THYROID GLAND WITH METASTASES.

IT may not be quite paradoxical to speak of metastases occurring in cases of non-malignant growths of the thyroid gland, for although the absence of generalization is one of the characters of non-malignant neoplasms, exceptions to this rule are not unknown. Thévenot and Patel (*Gazette des Hôpitaux*, 1901) have shown that myxomata may recur locally and even become generalized, while in his thesis, upheld at Geneva in 1882, Michaloff demonstrated that chondromata might become generalized to such an extent that secondary deposits of the neoplasm were found in the lungs, heart, brain, spleen, etc.

At the present time it would appear as proven that ordinary goiter, a non-malignant growth par excellence, can also give rise to metastases, as pointed out by Patel, in this year's March issue of the *Revue de Chirurgie*. The size and age of the goiter do not appear to have anything to do with the production of metastases; the histological make-up of the tumor governs all. Patel believes that goiters giving rise to metastases are always of the colloid variety and that the secondary deposits are more especially found in the bones and lungs. The bones most usually involved are those of the skull, pelvis or spine, in other words, the flat bones. Of all the viscera, the lungs are most frequently the seat of these metastases, and in 1903 Glockner reported the case of an enormous pulmonary thyroid teratoma at the Obstetrical Society of Leipzig.

One of the most interesting features of goiter giving rise to metastases resides in the fact that generalization of the neoplasm characterizes the entire affection. In those goiters giving rise to metastases there is nothing particularly worthy of note in the tumor itself or in the thyroid gland, because quite frequently the goiter is so small that its presence is unobserved. It is for this reason that in all the reported cases it is stated that the thyroid gland appeared normal or that the organ presented signs of ordinary goiter. Carcinomatous transformation of the gland has never been observed in the case under consideration.

There consequently is nothing which would indicate that a goiter will give rise to metastases; and on the other hand, when metastases occur there is nothing characteristic in them. Metastases of the bones of the skull give rise to attenuated symptoms of cerebral compression while those of the vertebræ produce incomplete para-

plegia and neuralgia of the limbs. Metastases in the lungs do not produce any symptoms apparently, so that it can readily be seen that secondary deposits from a non-malignant goiter are rarely discovered until the case comes to necropsy.

The idea that a non-malignant neoplasm may become generalized is so paradoxical that in spite of the recorded cases, one has questioned whether the starting point of the metastases was not to be found elsewhere than in a non-malignant growth of the thyroid gland. Housell believes that the origin of the metastases is to be found in the parathyroids but this opinion seems to be rejected at the present time, while Eberth and Wolfler have contended that the so-called non-malignant goiter was in reality an unrecognized malignant neoplasm of the gland. This opinion does not appear to have gained much support because the histological study of goiters with metastases has never demonstrated the presence of epithelial nests which are characteristic of carcinoma and has simply given the picture of a normal thyroid or one having undergone colloid degeneration. Consequently one has been led to believe that a non-malignant goiter may give rise directly to distant secondary deposits.

The prognosis of metastatic goiter is not easy to decide for the simple reason that the process is only discovered at necropsy, but an interesting fact placed in evidence by Patel is that thyroid grafts never produce the phenomena of hyperthyroidization, but rather to a kind of general cachexia.

The rare instances of this disease in which either medical or surgical treatment has been resorted to would seem hardly to encourage active therapeutics. Jäger tried thyroid opotherapy without success, while Feurer undertook the removal of a metastatic focus of the skull and was obliged to penetrate into the cerebral lobe on account of the extension of the secondary deposit into the brain substance. As to surgical interference undertaken in other regions than the cranium, it would appear that the patients derived little benefit from them.

ECHOES AND NEWS.

NEW YORK.

Sloane Maternity Hospital Appointments.—Dr. Ralph Waldo Lobenstine has resigned from the position of Resident Obstetrician at the Sloane Maternity Hospital. His resignation takes effect the first of September. He has held the position for the last two years and leaves in order to do private work in obstetrics and gynecology. Dr. Lobenstine's successor will be Dr. George Ryder, ex-House Gynecologist at the Roosevelt Hospital.

Experimental Surgery at Columbia.—Dr. J. W. Draper Maury has received a grant of $400 from the Rockefeller Institute for Medical Research. He will conduct experimental work in the subject of Tetany at the Surgical Laboratory of Columbia University next winter.

French Hospital.—The new French hospital on Thirty-fourth Street will be formally opened during the first part of October. It will be twice the size of the present building and will require an increase in the house staff. This has been provided for in the appointment of Doctors C. W. Walser, Henry A. Craige and Wm. Lamb.

Obstetrics at Dartmouth.—Dr. J. O. Polak, of Brooklyn, has been appointed to the Chair of Obstetrics in Dartmouth Medical College made vacant by the death of Prof. W. H. Parish, of Philadelphia.

Coroners' Physicians.—The Board of Coroners met in monthly session last week to consider the apportionment of the work of the coroners' physicians, a rearrangement being necessary owing to the transfer of Dr. Higgins to the position of police surgeon. At the close of the meeting, Coroner Scholer said there was no eligible list from which another physician could be selected. President McCooey, of the Municipal Civil Service Commission, says, however, that the board is prepared to furnish an eligible list of police surgeons from which a coroners' physician may be selected. The Board of Coroners object to this list, saying it is four years old, and claiming that the eligibles may not be pathologists. Referring to the matter, Coroner Goldenkranz said: "Coroners' physicians deal with medical and surgical cases, like the police surgeons, but in addition the coroners' physicians must be learned in the science of discovering abnormal conditions that exist in bodies after death, matters which police surgeons are not called upon to know."

PHILADELPHIA.

Bequests to Hospitals.—Many of the hospitals of the city received bequests of $5,000 to $10,000 from the estate of John L. Devereux, who left $141,000 to charity.

Physical Tests for Teachers.—The Board of Education has passed a by-law requiring all persons seeking positions as teachers in the public schools to undergo a physicial examination. Applicants for admission to the Normal School or the School of Pedagogy must also pass such an examination.

Meat Dealer Fined.—One of the eleven firms charged by Food Commissioner Warren with selling meat preserved with sulphites and other similar substances has been fined $50 and costs; the others have been held for trial.

University of Pennsylvania.—At the one hundred and forty-eighth annual commencement held June 15, degrees were conferred up 650 graduates. Of these, 96 were in medicine, 120 in dental surgery, and 28 in veterinary surgery. The honorary degree of Doctor of Science was conferred upon Drs. George Dock, of the University of Michigan, and Russell H. Chittenden, of Yale; Doctor of Laws on Drs. H. C. Wood, of the University, and H. P. Bowditch, of Harvard, and Sir Frederick Treves, of London.

Jefferson Hospital.—Dr. L. H. McKinnie has been appointed Chief Resident Physician. Dr. W. F. Manges has been made Skiagraphist to the hospital. Changes in the plans of the new hospital have necessitated the removal of parts of the framework erected

last year. When this is done the building will be pushed to completion.

Children's Homeopathic Hospital.—The new wing containing 58 beds has been opened, increasing the capacity of the institution to 130 patients. A recent improvement is an isolation ward where mildly infectious cases can be treated.

Special Lectures for the County Medical Society.—At the meeting of May 25, Dr. J. Madison Taylor read a paper on this subject in which he expressed the doubt that one-half of the members of the Society gather much assimilable knowledge from the ordinary journal article or paper read before the Society. They are not primarily designed to instruct though they may contain admirable facts, formulations and conclusions. They are written for publication and lack the simplicity and directness needed for purposes of instruction. To overcome these disadvantages, Dr. Taylor recommended the establishment of a course of postgraduate lectures by the Society for its own members. Publication in the transactions is not a part of the idea, this giving the speaker more freedom in his explanations and illustrations. The presence of the Secretary of the Society would not be needed at these meetings; discussion on the lectures should not be allowed, neither their publication in the daily papers. Acting on this suggestion, the directors of the Society have recommended a resolution setting apart the third Wednesday evenings of November and December of the present year for lectures on subjects of practical interest.

CHICAGO.

Hospital Dedicated.—The addition to St. Francis' Hospital, Freeport, Illinois, erected at a cost of $47,000, was dedicated June 8.

Appointment of Dr. Dugan.—Dr. Richard D. Dugan has been appointed President of the Illinois Board of Health.

Degree Conferred on Dr. Quine.—At the commencement exercises of the University of Illinois, June 8, the degree of Doctor of Laws was conferred on Dr. Wm. E. Quine.

CANADA.

Perpetuating a Medical Charter.—An interesting ceremony took place one day last week in Toronto when, in accordance with an Act passed at the recent session of the Ontario Legislature authorizing the Government to purchase the building of the old Toronto School of Medicine, the charter was surrendered and perpetuated. An order in council was put through taking over the building at the price of $12,000 as well as the charter of the school. There can now be no revival of that school as a rival to the University. The old Toronto School of Medicine was established in 1851 and incorporated by special Act of the Ontario Legislature, the charter being granted to Dr. John Rolph, Dr. Joseph Workman, Dr. W. T. Aikins, Dr. James L. Gavin, Dr. Russell and Dr. T. D. Morrison. The corporation at the time of its merger was as follows: Dr. James H. Richardson, Dr. Uzziel Ogden, Dr. James Thorburn, Dr. W. W. Ogden, Dr. Moses Aikins, Dr. R. A. Reeve and Dr. William Oldright. Although all of these latter are alive, only the two latter, Dr. Reeve, who is Dean of the Medical Faculty, and Dr. Oldright, who is professor of Hygiene, are in active teaching. The nominal members of the corporation now are: The Hon. Richard Harcourt, Minister of Education; Mr. J. R. Cartwright, K.C., deputy attorney-general; Mr. John Millar, Deputy Minister of Education; Mr. Thomas Mulvey, K.C., Deputy Provincial Secretary, and Dr. C. A. Hodgetts, Secretary of the Provincial Board of Health. The charter of Trinity Medical College was surrendered to Trinity University over a year ago, and in the federation was absorbed by the University of Toronto.

Help for Consumptive Poor.—During the past week there was held in Toronto a meeting of the Executive Committee of the National Sanitarium Association. A check was received from the Hamilton Branch of the Association for $3,000, a contribution from the people of Hamilton and county of Wentworth toward the support of the consumptive poor of those municipalities, at the Muskoka Free Hospital for Consumptives. A pavilion with accommodation for ten patients has been set aside to be known as the "Hamilton and Wentworth County Pavilion," which will be for male patients alone, the female patients being cared for in a ward in the main building. Word was received also that a branch had been successfully established at Ottawa and that some $2,000 had been subscribed, and special accommodation is to be set aside for patients from Ottawa. The Manufacturer's Life Assurance Company also contributed a sum of $500 toward endowing two beds for one year.

Ontario Medical Association.—The twenty-fourth annual meeting of the Ontario Medical Association opened in the Toronto University Building, Toronto, on June 14, and continued in session for the two following days. Dr. James F. W. Ross, the President of the Association, occupied the chair, while Dr. Chas. P. Lusk, Toronto, acted as General Secretary. There was a large attendance of physicians from different parts of the Province, and the meeting was one of the most successful in the history of the Association. The program was a very attractive one, each paper eliciting keen discussions. Among these was one by Dr. H. P. H. Galloway, of Toronto, giving the report of a case of bilateral congenital dislocations of the hips treated by the Lorenz bloodless method, together with a brief review of the status of the Lorenz method. Dr. Ross delivered the annual presidential address. Some of the matters referred to in his address were as follows: "The regular who adopted the methods of the quack was more dangerous than the quack himself; some surgical procedures of the present day require severe criticism; surgeons may be too conservative or not conservative enough; a few years ago we had an epidemic of the former and now we are suffering from a plague of the latter. Referring to the registration of births and deaths and notifying of infectious diseases, they were in doing this work assisting and defending the commonwealth, and the commonwealth should pay for it accordingly. He advocated the establishment by the Association of a special committee to deal with these matters as well as that of commissions to report at the next annual meeting. A symposium on life assurance was the feature of the meeting and occupied the whole morning session of the second day. This was contributed to by well-known medical men in the profession in Ontario, most of whom were connected with life assurance companies as medical directors. The discussion which followed was an animated one and it was quite apparent that the general consensus of opinion was that the fees for examinations were not commensurate with the work performed. One speaker mentioned the fact that in Toronto examinations were done for one company at the rate of 25 cents each, an announcement which elicited nothing but disgust.

At the annual Association luncheon, the Premier of the Province of Ontario was present and delivered an address in which he foreshadowed Government aid to a hospital which is now being considered in connection with the Medical Department of the University. The following were the officers elected for the ensuing year: President, Dr. William Burt, Paris, Ont.; First Vice-President, Dr. John L. Davison, Toronto; Second, Dr. George Hodge, London; Third, Dr. Edward Ryan, Kingston; Fourth, Dr. T. H. Middleboro, Owen Sound; General Secretary, Dr. Chas. P. Lusk, Toronto; Assistant Secretary, Dr. Samuel Johnston, Toronto; Treasurer, Dr. Fred. Fenton, Toronto.

GENERAL.

Association of American Medical Colleges.—The fifteenth annual meeting of the association was held in Atlantic City, N. J., June 6, 1904. Fifty-two colleges were represented. Four colleges applied for membership and were accepted. The application of one college was not acted upon, pending further investigation. The total membership of the association is seventy colleges. The association acted favorably on the recommendation of the Special Committee to continue the visitation and inspection of all the colleges that are members, and the following committees were appointed to report at the next meeting: Committee on Uniform Curriculum: Geo. M. Kober, W. J. Means and Parks Ritchie. Committee on Medical Education: Fred. C. Zapffe. This committee to confer with similar committees from the American Medical Association, Southern Medical College Association, American Confederation of Reciprocating Examining and Licensing Medical Boards, The National Confederation of Licensing and Examining Boards, The American Institute of Homeopatny, The National Association of Eclectic Physicians and Surgeons, and the Association of Physio-medical Physicians and Surgeons. This committee is to consider the question of medical education in all its phases, including preliminary education and entrance requirements. Papers were read by Wm. H. Wathen, Louisville; H. L. Taylor, Albany, N. Y.; Geo. M. Kober and Seneca Egbert, Philadelphia. The following officers were elected for the ensuing year: President, Samuel C. James, Kansas City, Mo.; First Vice-President, R. Dorsey Coale, Washington, D. C.; Second Vice-President, R. H. Whitehead, Chapel Hills, N. C.; Secretary-Treasurer, Fred. C. Zapffe, 1764 Lexington Street, Chicago; Judicial Council, Wm. J. Means, Columbus, Chairma; Randolph Winslow, Baltimore; H. B. Ward, Lincoln, Neb.; Geo. M. Kober, Washington, D. C.; Thos. H. Hawkins, Denver, Colo.; Parks Ritchie, St. Paul, Minn.; John M. Dodson, Chicago. Time and place of next meeting, June 5, 1905, Portland, Ore.

American Gastro-enterological Association.—This Association held its annual meeting at Atlantic City, June 6 and 7. A symposium on Gastric Ulcer was the chief topic of the proceedings. Harlow Brooks, of New York, discussed the pathologic anatomy, and W. G. MacCallum, of Baltimore, the pathogenesis. Campbell Howard (from Osler's clinic) analyzed the postmortem and clinical statistics of many hospitals in the United States and Canada. Symptomatology, course, complications, sequelæ and differential diagnosis were discussed by M. Einhorn, J. Kaufmann, M. Manges, all from New York, and H. W. Bettmann, Cincinnati. Medical and surgical treatment were discussed by S. W. Lambert and J. A. Blake, both of New York; the condition of the blood and urine was discussed by T. Futcher, of Baltimore, and the occurrence of gastric ulcer in children by E. G. Cutler, Boston. Other papers were read by J. C. Hemmeter, J. Friedenwald, both of Baltimore, C. D. Aaron, of Detroit, F. H. Murdoch, of Pittsburg, and F. B. Turck, of Chicago. The following officers were elected for the coming year: President, S. J. Meltzer, of New York; First Vice-President, F. H. Murdoch, Pittsburg; Second Vice-President, H. W. Bettmann, of Cincinnati; Secretary, C. D. Aaron, Detroit; and on the Council, W. G. Morgan, of Washington. The next meeting will take place in New York during the Easter vacation.

Tulane University.—By the will of the late A. C. Hutchinson of New Orleans, Tulane University of that city will receive cash and personal property worth nearly $800,000 as an addition to its endowment.

Inter-State Indorsement vs. Inter-State Reciprocity in Medical Licenses.—The following resolutions were introduced by Dr. E. L. B. Godfrey, secretary State Board of Medical Examiners of New Jersey, at the meeting of the Confederation of State Medical Examining and Licensing Boards, Atlantic City, N. J., June 6, 1904:

WHEREAS, national legislation cannot affect the question of State jurisdiction in medical practice without the surrender of definite State sovereignty, and

Whereas, State medical examination is the basis for State medical license, or the indorsement of a license issued after an approved examination of another State, and each State is the judge of the qualifications of its medical licentiates, and

Whereas, it is manifestly unjust and a cause of open complaint by the profession to compel an experienced physician, licensed after State examination, to undergo a second examination (practically a re-examination in the same elementary branches) upon removing from one State to another, when the requirements for medical license in the two States are substantially the same, or lower in the State from which indorsement is asked; therefore

RESOLVED: That it is the sense of this Confederation that, among those States whose standards of requirements are equal or substantially the same, their licentiates by examination who can meet the moral, academic, medical and examining requirements of the State whose indorsement is asked, are entitled to and should be indorsed, irrespective of reciprocity.

Resolved: That when the standard of requirements of any two States are unequal, it is in the interest of the profession that the State having the lower requirements should indorse the examined licentiates of the State having the higher requirements, irrespective of reciprocity, when such candidates can meet every legal and educational requirement of the indorsing State.

Resolved: That reciprocity limited by statute to reciprocating States, which demands equal rights and privileges in return as conditions of indorsement, with the purpose of compelling recognition of its own licentiates, is detrimental to and retards the progress of the profession, because: (1) It restricts the extension of indorsement by its limitations. (2) It causes hardship to the profession because of its uncertain tenure. (3) It excludes indorsement from States having higher requirements by reason of which reciprocity cannot be effected. (4) It refuses recognition to distinguished physicians of non-reciprocating States. (5) It recognizes neither the merit of a State examination nor that of the licentiate as compared with reciprocity. (6) It tends to maintain standards at the level of the lowest reciprocating State, and offers no inducement for a State to raise its

standards above those of its reciprocating neighbors. (7) It practically involves an omnibus indorsement, without inquiry as to the status of the individual candidate, and without discrimination, since all licentiates of a State stand legally upon an equal footing. (8) It is impractical for adoption by any considerable number of States, because of the difference in State laws, standards and population.

Resolved: That reciprocity based upon a voluntary agreement of State boards is, like statutory reciprocity, impractical, because: (1) There is no uniformity in State laws and no ability to enforce them. (2) When differences arise between Examining Boards, in respect to the status of colleges, the grade of examinations or the eligibility of candidates rejected by one Board for examination by another, there is no law, national, interstate, or state, to adjust the differences or to enforce the agreement which may be broken at the pleasure of either Board and without redress.

Resolved: That inter-state indorsement, authorized by statute and exercised at the discretion of a State Medical Licensing Board, irrespective of reciprocity, based upon the substantial equality of educational requirements, upon a State examination satisfactory and approved as to kind and grade, and upon the individual merit and the professional qualification of the candidate for indorsement, is far better than indorsement based upon either statutory or voluntary reciprocity, and tends more than either to further the cause of higher medical education and the autonomy of the profession throughout the country. (1) It is good State policy since it neither denies citizenship nor the right to practice to any physician entitled through merit to its privileges. (2) It makes the State the sole judge of the qualifications of its licentiates by enforcing the same requirements for indorsement as for examination for license, thus placing all licentiates on the same footing. (3) It accepts a State examination for what it represents as an examination, but not as more important than the merits and qualifications of the candidates for indorsement. (4) It tends to raise and maintain a high standard of education by making a license from a State with high requirements more widely acceptable for indorsement than one from a State of low requirements, and thus admits of early national application. (5) It requires legal evidence of individual merit as well as professional qualifications for approval for indorsement, and thus tends to reduce to a minimum the indorsement of irregular, itinerant practitioners. (6) It puts a premium on character and education and renders the best practitioners eligible for indorsement in every State. (7) It indorses both the State and the individual candidate, and failure of a State to reciprocate, therefore, does not afford either a legal or valid reason for rejecting any of its licentiates who can meet every requirement of the statute. (8) It may accept any of the examined licentiates of a State for indorsement, or only those examined and licensed under the most recent requirements.

Resolved: That a State that will not indorse the examined licentiate of another State where the standards are co-equal, or of a State where the standards are higher, stands as a hindrance to medical progress, because: (1) It does not recognize the efficiency once proved by examination in a State of co-equal or higher requirements. (2) It limits the working sphere of the profession. (3) It exacts the same requirements for license from the physician, duly licensed after an examination in a co-equal State and experienced by years of practice, that are exacted from the inexperienced graduate.

Resolved: That indorsement, therefore, irrespective of reciprocity, should be granted to examined licentiates of States whose standards of requirements are co-equal or higher, when the candidate for indorsement can meet in all respects the requirements of the statute governing the practice of medicine.

After discussion, the resolutions were ordered to lie on the table, to be printed by the Secretary, distributed among the members and presented for consideration at the next meeting.

OBITUARY.

Dr. D. J. TREACY, one of the best known practitioners in the southern section of Philadelphia, was found dead in bed on June 20. Heart disease, from which he had suffered for some years, was the cause of death. Dr. Treacy was born in Ireland but came to this country in boyhood. He was sixty years of age. He graduated at Jefferson in 1867.

Dr. JAMES SIMPSON, sixty-five years old, and a practising physician on Pine Street, Philadelphia, for a quarter of a century, died June 20 from an illness beginning in March; an operation three weeks ago failed to improve his condition. During the Civil War he was appointed a surgeon and had charge of the hospital corps at Alexandria the entire time, although he had not yet finished the course at Jefferson.

Dr. NATHAN SMITH DAVIS, Sr., died at his home in Chicago, Ill., Thursday, June 16. He was eighty-eight years old. He was born Jan. 19, 1817. He was one of the founders of the American Medical Association; also one of the founders of Northwestern University, the Chicago Academy of Sciences, the Chicago Historical Society, the Illinois State Microscopical Society, the Union College of Law, and the Washingtonian Home for Inebriates. His fame as a physician was by no means confined to the boundaries of Illinois, for he bore an exalted reputation in his profession throughout the entire country. In 1855 he became editor of the *Chicago Medical Journal.* In January of 1860 he started a new magazine, and called it the *Chicago Medical Examiner,* which he continued as an independent journal until 1873, when both publications were merged under the title of the *Chicago Medical Journal and Examiner.* In 1883 he was chosen editor of the *Journal of the American Medical Association.* The most important of Dr. Davis' writings is said to be a text-book on agricultural chemistry, used in district and public schools. He was also the author of a history of medical education and institutions in the United States from the settlement of the British Provinces to 1850. He was a frequent contributor to the current periodical medical literature.

Dr. JAMES H. DUNN, of Minneapolis, Minn., after reading a paper before the American Surgical Society at St. Louis dropped dead in his room June 16. He was forty-eight years old.

SOCIETY PROCEEDINGS.

THE AMERICAN MEDICAL ASSOCIATION.

Fifty-fifth Annual Meeting, held at Atlantic City, N. J., June 7 to 10, 1904.

SECTION ON MEDICINE.

THIRD DAY—JUNE 9TH (*Continued*).

(Continued from Page 1189.)

Microbic Infection.—The discussion was opened by Dr. Anders, of Philadelphia, who said that while microbes are a necessary element in the causation of gallstones an additional factor is required. Local congestion in the biliary tract and the inspissation of bile, with consequent lack of drainage invite infection. It is important then that the gastro-intestinal tract should be

kept in the best possible condition so as to avoid these local disturbances in the biliary tract. The part of the medical man is as far as possible to prevent the formation of gall-stones and remove the causative conditions. It is interesting to have Dr. Sippy say that medical measures, rest and diet may overcome the tendency to contraction of the pylorus which sometimes occurs in connection with gall-stones and which makes the patient so unsuitable for the serious operation. In this matter of preparation for the operation, the medical man can be of great use to the surgeon. In Dr. Anders' experience, just before the occurrence of true gall-stone colic, there is pain referred to the tenth dorsal vertebra. This pain is not found in cholecystitis. The latter is accompanied rather by a sense of vague discomfort than the boring pain referred to the lower dorsal space. Early diagnosis is important, between these conditions, for while cholecystitis is a medical affection, cholelithiasis must not be given over to the surgeon.

Gall-stone a Foreign Body.—Dr. William M. Mayo, of Rochester, Minn., said that the touchstone of cholelithiasis as a surgical condition is the fact that a gall-stone is a foreign body and must be considered as such. Whenever it gives trouble it should be removed. Many gall-stones slumber for long periods, even for a lifetime, but, as a rule, once they awaken they do not slumber again. At the present time the mortality from operation for gall-stones in uncomplicated cases is not more than three per cent. Even this is largely accidental. Operation is not much more dangerous than for appendicitis in the interval. The trouble is that cases go too far before being referred to the surgeon. It is proper for the physician to state deliberately to the patient how much of added danger delay will bring. The mortality in complicated cases is 16 per cent. in the most experienced hands. If this is explained to patients, there will be less likelihood of their putting off the operation too long.

Benefits of Operation.—After the removal of gall-stones other chronic conditions in the gastro-intestinal tract, and especially in the pancreas, subside. The chronic inflammation of the pancreas, which may become serious, disappears on proper drainage of the biliary tract. Dr. Mayo has found on several occasions that the blocking of the duct of the pancreas has led to an enlargement of the head of the pancreas behind which the common duct became hidden. After drainage of the gall-bladder this became reduced in size and revealed the presence of a stone that had been hidden behind it.

Bile and Pancreatic Fluid.—Dr. William S. Thayer said that he had had the opportunity to read Dr. Opie's paper and that in Dr. Opie's absence he wished to discuss some of the points that would have been presented. Dr. Pavlov, of St. Petersburg, has shown that bile increases the fat-splitting power of the pancreatic juice three to four fold. It does this for all the ferments, but especially for the fat-splitting ferments. Hence, very probably, the reason why the entrance of bile into the pancreatic duct gives rise to acute pancreatitis. Dr. Opie has shown that the existence of even a small stone in the papilla of the common bile duct may lead to the passage of bile into the pancreas. As both the pancreatic and biliary ducts empty through this orifice this is not difficult to understand and he has demonstrated biliary staining of the pancreatic ducts. Gall-stones then are associated with pancreatitis, probably in a causative relation. It has been found that a fat-splitting ferment may be found in the urine whenever there is disturbance of the pancreas. This has been demonstrated on dogs in whom bile was injected into the pancreas. This will probably prove of service in the diagnosis of pancreatic conditions. Whenever at abdominal operations, spots of fat necrosis are found on the peritoneum all gall-stones should be removed. They are probably the cause. Such conditions may develop without extensive pancreatitis and the prognosis is by no means fatal. These small stones, which give rise to such conditions, may or may not cause jaundice, though usually this symptom is present.

Gall-bladder Pain.—This may occur either before or after the taking of food, usually on an empty stomach but, at times, just after taking food, simulating gastric ulcer. Emaciation in connection with gall-stones is usually due to adhesions of the pylorus. These may lead to dilatation of the stomach and the largest dilatations Dr. Thayer has ever seen were due to this cause. In a case seen recently, on the other hand, the pain felt was in the median line and bore no relation to food and there was large dilatation of the stomach. Only a slight superacidity was present, and it was concluded that the condition was due to gall-stones. At operation two ulcers of the stomach, causing blocking of the pylorus, were found.

Early Operation.—Dr. Thayer said that the important matter must be to insist on having early operation for gall-stones. If surgical intervention is delayed it may be found that coagulation time of the blood has increased very much, even up to twelve or fifteen minutes, and as a consequence, after operation the patient bleeds to death in old cases of gall-stones; this is one of the most serious possibilities that have to be faced.

Intrahepatic Stones.—Dr. J. C. Hemmeter, of Baltimore, said that in a recent case under observation, the patient, the wife of a physician, had suffered from typical symptoms of gall-stones and a resection of the gall-bladder was done. A number of stones were found and removed. After the operation, however, the symptoms redeveloped and a second operation had to be done, when three stones were found in the gall-ducts within the liver. This emphasizes the necessity for careful searching for gall-stones in these cases in order to avoid the necessity of a repetition of the operation.

Gall-stones and Metabolism.—Dr. Hemmeter considers that certain disturbances of metabolism are constantly associated with the formation of gall-stones. Overeating, and especially the overconsumption of fats, is one source of this metabolic disturbance. In those who have given any signs of discomfort in the biliary region it may be important to try to do away with gastro-intestinal disturbances of every kind. The differential diagnosis of gastric ulcer and gall-stones remains a very difficult matter. It must be remembered, however, that in gastric ulcer a peptic ferment occurs in the urine and the finding of this may be one element in the diagnosis. On the other hand, orthoform will prevent the pain of ulcer if administered before the giving of food and will stop the pain after it has begun by its local action upon the tissues. Orthoform will not, of course, affect cholelithiasis.

Cholelithiasis, Surgical not Medical.—Dr. Frank Billings, of Chicago, said that there is no medicine and no system of remedial measures that will dissolve a gall-stone once formed. As has been said, a gall-stone is a foreign body, and if it is giving symptoms, should be removed. Drainage of the gall-bladder by preventing the progress of infection may save recurrence of painful conditions. Internal drainage by means of cathartics, may accomplish this same purpose. Hence the benefit derived by the treatment at Carlsbad. Once the gall-bladder has become infected, however, the case should be handed over to the surgeon. A single attack of gall-stone colic is not enough to justify this, but if attacks have been repeated, especially at brief intervals,

then there seems no hope of relief by the passage of stones.

Toxin and Pressure.—Dr. Wilson said, in closing the discussion, that some of the cases are overwhelmingly toxic, due to pressure. All the cases in which he has seen lumbar puncture followed by the exit of bloody fluid from the spinal cord have been unfavorable. On the other hand, when the fluid is clear the prognosis is favorable. This is the experience also of Dr. Riessman, who has had three fatal cases in which bloody fluid was present. With regard to failures to obtain fluid on lumbar puncture, Dr. Wilson considers that too short a needle is generally responsible for this. A four-inch needle is sometimes recommended. Dr. Wilson has used a five-inch trocar and canula and never fails to get in or to get fluid.

Amebic Dysentery.—Dr. James P. Tuttle, of New York, said that when the Shiga bacillus was discovered it was considered that most cases of dysentery were due to this. The *Amœba coli*, however, had been previously shown to occur in certain cases. Now, it is known that there is a third type due neither to the ameba nor to Shiga's bacillus, nor so far as is known to any specific microorganism. Dr. Tuttle has had the opportunity to study 74 cases of amebic dysentery in which motile amebæ were found in the stools or the scrapings of the ulcers. In these cases the symptoms disappeared with the ameba and recurred when it could be found again. The source of the ameba is not known. It differs from the fresh water ameba by its susceptibility to changes of temperature. Fresh water amebæ are motile at high and low temperatures. Dysenteric amebæ are killed by a reduction of temperature. The size is not enough for the diagnosis. It used to be considered that these microorganisms increased by division. Now it is thought that they increase rather by sporulation.

Low Temperatures Unfavorable.—The life of the ameba at human temperature seems to be indefinite. Whenever the temperature is reduced to 70 degrees, however, the motility of the organism disappears and does not reawaken. Cold is much more effective than any chemical agent in producing death. In order to examine the stools for ameba, the feces must be obtained warm. They must also be examined upon a warm slide. One of the easiest ways to find them is from the scrapings from ulcers as obtained through a proctoscope.

Dr. Tuttle has found them in long-standing mucous colitis with constipation rather than diarrhea. In a patient now under observation mucous colitis has continued for four years, without any thought of a possible connection with the ameba. Yet these organisms have now been found. It is often said that the ameba has its home principally in the tropics. But they seem to occur almost anywhere. Three of Dr. Tuttle's patients have never been out of Greater New York. Cases are known where patients always lived in New England, or even in Canada.

Ulcerative Lesions.—The ulcers due to the *Amœba coli* are said by Roger and Futcher to occur particularly in the caput coli. Dr. Tuttle has always found them, however, in the rectum and the sphygmoid. Where ulcers occur higher up, the cases are more obstinate to treatment. The amebæ do not occur on the surface of the ulcers but in the submucosa. Here no chemical antiseptic can reach them, hence it is hopeless to expect a cure by means of quinine or other injections. The amebæ will not, however, live at a temperature below 65 degrees. Dr. Tuttle has found that the best treatment is by large injections of ice water. The rectum is flushed with ice water with the patient in the knee-chest position and as much water as possible retained.

Surgical Treatment.—In obstinate cases where the disappearance of ulcers in the rectum and sphygmoid is not followed by relief of symptoms and where there is tenderness over the caput coli, Dr. Tuttle suggests the usual incision for appendicitis, the stitching of the appendix into the wound and then, after adhesions had formed, the cutting off of the appendix. Through the opening into the bowels thus afforded cold water is injected by means of a catheter and the affection is relieved. The patient, as a rule, is around in ten days and suffers no inconvenience. Dr. Tuttle exhibited a physician who had been thus treated and who has been cured of an amebic dysentery which had existed four years.

Simulation of Gastric Disease.—Dr. Allen Jones, of Buffalo, said that patients with latent gall-bladder disease, frequently suffer from stomach symptoms. While the characteristic colic occurs usually on an empty stomach, it is not unusual for patients with gall-stones to have discomfort after eating. As the result patients frequently think that they have stomach disease, but chemical examination shows normal secretion and motility. In these cases, however, suspicion with regard to the possibility of gall-bladder disease should be aroused and then sometimes further confirmatory symptoms will be obtained.

Non-surgical Gall-bladder Disease.—Dr. James C. Wilson, of Philadelphia, said that there are two classes of patients suffering from gall-stones who must not be considered surgical. In the first class there is permanent latency of the disease except for vague discomfort, which does not advance beyond this. In the other, after a typical seizure, or even two, of gall-stone colic, a stone is passed and then there are no further symptoms. These are the cases that make physicians hesitate as to the recommendation of surgical intervention. They are, however, very rare and should not be allowed to count for much in the formation of the physician's opinion. It is from these cases too that the traditions with regard to supposed therapeutic efficacy of small doses of chloroform or of large doses of olive oil are derived. Gall-stone disease, however, in the great majority of cases is a surgical and not a medical affection, and exceptions only serve to illustrate the rule.

Ergot in General Practice.—Dr. Alfred T. Livingstone, of Jamestown, N. Y., said that ergot has unfortunately been used only in one branch of medicine while undoubtedly the drug has applications in many. He has found it of great service in a number of affections. Wherever there is passive congestion with relaxed unstriped muscular tissue, ergot gives tone and thus affords relief of many symptoms. Not infrequently paresis of the vasomotor nervous system can be relieved by this means. As a rule, the conditions which develop as a consequence of lack of tone in the nervous system are treated by means of stimulants. These do good only for the moment, but eventually always do harm. Strychnine, digitalis and alcohol are unreliable and after a time patients become accustomed to them. In some cases overstimulation may even prove fatal. Stimulation of the heart for instance, inevitably increases weakness, but does not overcome it.

Equilibrium of Circulation.—What ergot especially effects is an equilibrium of the circulation. When the heart is laboring and the unstriped muscular fibers in the blood vessels are relaxed there is no proper response to the heart's work in the elasticity of the arteries. As a consequence circulatory conditions become worse and worse. On the other hand, when the heart is doing excessive work and there is high tension in the arteries, ergot will correct this and bring about circulatory equilibrium much better than can be accomplished by

depressant drugs. In recent years it has come to be realized that shock is a vasomotor paresis of the abdominal blood vessels. It is in this region of the body especially that ergot can be depended upon to give tone to the vessels. It would seem then to be the peculiar province of this drug to correct conditions that lead to shock and collapse. Dr. Livingston's attention to the value of ergot was first called by the benefit derived from its use in insanity. In all forms of functional nervous disease, however, it has a definite value. Pain is usually the result of pressure upon nerves and this pressure is due oftenest to a congestion consequent upon loss of tone in the blood vessels. In these cases ergot often does good. In neuritis, in certain forms of neuralgia, in many cases of angina pectoris and even in such conditions as intestinal colic ergot may be of distinct service. In the nervous symptoms due to alcoholism or to drug addictions no other remedy is so helpful. Morphine may be cut off at once and yet no evil results follow. While ergot is not a narcotic it serves to promote sleep by maintaining a certain anemia of the brain after the intense hyperemia consequent upon drug or alcoholic excesses.

Illustrative Case.—A physician recently under Dr. Livingston's care had been taking two drams of morphine a day and two drams of cocaine a week. As the result of the hypodermic injection of two drams of ergot, he slept quietly for forty-two hours, being awakened at intervals in order to be given liquid food and drink, but dropping off to sleep again at once. No collapse followed, though no further morphine was allowed and no cocaine or any substitute employed. No other hypnotic was thought of and the result has been a complete cure of the case.

Paretic Convulsions.—Dr. Stranahan, of New York, said that ergot is a popular drug in insane institutions and has become the standard remedy for cases of paretic convulsions. At first chloral and ergot were given in combination by the rectum, but ergot alone is really better. Nothing will control these convulsions like this drug. In general practice Dr. Stranahan has found ergot very useful especially in the congestive stage of pneumonias. Sometimes it seems even to abort the disease. In a case recently seen the temperature was above 106° F. and the pulse 135 and the patient delirious. After the injection of two fluid drams of ergot, repeated once at the end of two hours, the temperature fell to 103° F. and the delirium disappeared. In spite of the alarming beginning the pneumonia did not run a severe course.

Postanesthetic Nausea.—Dr. Basch, of New York, has found ergot of good service in reducing the nausea which occurs after anesthesia. The drug is given for several days beforehand and contributes not a little to calm the patient. After its use even when there has been decided manipulation of the inestines, very little shock is noticed. The racking headache so common after anesthesia is very much lessened by its use. There is a popular impression, according to which patients dread the anesthetic more than the operation itself. This is due to the unpleasant after-effects, and these can be greatly lessened by means of ergot, thus encouraging patients to undergo operations for which they would otherwise be unwilling.

Neurotic Conditions.—Dr. James J. Walsh, of New York, said that his own experience with ergot is limited to seeing its effects upon delirious alcoholics, where it undoubtedly is of great service. Dr. Homer Wakefield, of New York, however, who has seen good effects from it in many neurotic conditions, but who is unable to be present at the meeting asks that his opinion of its value for such affections be stated. In the neurasthenic conditions, which are responsible for the tired feeling and which are probably due to relaxed conditions of the abdominal blood vessels with consequent sluggish circulation, ergot is the best remedy and is much better than any of the stimulants that are ordinarily employed. Dr. Wakefield has also found ergot of decided benefit in the treatment of heart disease with lost compensation especially in combination with the Schott method of treatment. He has found that dilated hearts may, after the use of ergot and the consequent lessening of resistance in the circulation, be demonstrated by the X-rays to be smaller in size.

Wet Brains.—Dr. Alexander Lambert, of New York, said that ergot is undoubtedly the best remedy for acute alcoholism that has yet been introduced. In the very severe cases of alcoholic delirium in which there is a tendency to edema of the brain, these cases being usually known as wet brain, no other remedy has been so effective. For the tremor of alcoholism ergot is a rapidly effective remedy. Recently when going on his service at Bellevue, Dr. Lambert found 16 patients who had to be tied in their beds. After the use of ergot all of them could be relased from their bandages and though they continued to mutter in delirium, they were comparatively quiet. Ergot is the only remedy which allows morphine to be taken away at once without inflicting great suffering upon the patient and without the danger of sudden death. Dr. Lambert has never seen a case of collapse after the sudden withdrawal of morphine when ergot was given.

Nauseating by the Mouth.—Dr. Livingston said that the action of ergot is uncertain when given by the mouth, since it often proves very offensive to the stomach and as a consequence of this is absorbed very slowly. When it is needed its action is wanted at once, therefore it is better to introduce the drug hypodermically, when its effect is certain and immediate.

Differential Leucocytosis.—Dr. William Krauss, of Memphis, Tenn., presented some studies in the differential leucocytosis of fevers which had been made with the idea of seeing how far this method could replace culture methods in districts where these cannot readily be obtained. The result is that for tentative diagnosis in the beginning of typhoid fever, or in malarial infection when the parasites are not found at first, a specific picture is obtained. In malaria without much fever, before quinine has been administered, the polynuclear leucocytes are much reduced in number and the large mononuclears are correspondingly increased in size. In cases where there is for any reason a large number of glands enlarged this will not be true. In malarial infection under quinine, the number of polynuclears rises to 80 per cent., though the large mononuclear leucocytes exceed in number the small mononuclears. Typhoid fever may give the same picture as malaria at the beginning, but while waiting for a Widal reaction, the giving of quinine would be justified, since the presence of malaria is much more likely. In gradually developing fever there is an absence of marked increase of large lymphocytes, or of polynuclears, which is characteristic of this type of fever. Accordingly, a suspicion of typhoid would be aroused and precautions could be taken against possible infection, even before a Widal was positive on the strength of this picture.

Uremia and Eclampsia.—Dr. Robert N. Willson, of Philadelphia, discussed the pathogenesis of these two conditions. In his experience pressure upon the cerebrum exerts a great part of the influence in producing symptoms. It is possible by the injection of large amounts of salt solution to produce the characteristic amaurosis and other symptoms of uremia even though there may be no poisonous products present. Not in-

frequently when pressure symptoms are relieved, the patient becomes better. The characteristic symptoms of headache, sleepiness, nausea, neuralgia, tinnitus, aphasia, bladder and intestinal incontinence may all result from pressure. In a case under Dr. Willson's care, suffering with the typical coma, incontinence of urine and a distinctly urinous breath, when a needle was introduced into the spinal canal, the spinal fluid spurted out. After the removal of 26 c.c., the patient became distinctly better. Characteristic Cheyne-Stokes breathing ceased, though it recurred later. Next morning after another 10 c.c. were removed there was another period of relief of symptoms. This came at a time when the patient's conjunctiva was absolutely unresponsive to touch. Other treatment usual in such cases as hot packs had simply made the patient worse and purgation and nitroglycerin failed of action. Only lumbar puncture did any good. At the autopsy in this case the ventricles of the brain were found greatly dilated and the arteries gaped when cut because of the pressure to which they had been subjected. Dr. Willson considers that while there is a toxic element in uremic convulsions many of the symptoms are due to intracranial pressure, and as this can be relieved readily a hint for treatment is thus given. German observers have found some relief from lumbar puncture but not much lasting benefit has been obtained. The problem of treatment is somewhat simplified, but on the other hand it is evident that the infusion of normal salt solution, as suggested by some, with the idea of diluting the toxins present is absolutely contraindicated, since this would increase blood pressure and since injections of normal salt solution in animals have been sufficient to produce uremic symptoms.

Reflex Elements.—Dr. James Tyson said that the causation of uremia has long been disputed. There seems no doubt that there are toxic elements in the etiology, though probably other factors enter. Dr. Willson's presentation of the factor of intracranial pressure seems to deserve special attention. Dr. Tyson has considered that eclampsia may to some extent be a reflex somewhat as convulsions in children; that is to say, in a condition of not firmly established equilibrium of the nervous system, the number of nerve impulses carried to the central nervous system sets up so much irritation as to cause a spontaneous explosion of nerve force.

Eclampsia and the Liver.—Dr. Alexander Lambert said that as the result of a number of recent observations eclampsia has come to be associated in his mind with lesions of the liver. Often the fatal cases have not gone to the extent of acute yellow atrophy, but they represent a beginning stage of disaffection. In hyperemesis gravidarum the same thing seems to be true and leucin and tyrosin are found in the urine just as in acute yellow atrophy. The lesions of the liver are extensive, but seem to be found in all the cases. There seems no doubt that the convulsions of uremia and eclampsia are due to hypertension, but what causes this?

Hot Water Treatment.—Dr. Fenton B. Turck, of Chicago, said that he found very hot water preferable to very cold water for the treatment of amebic dysentery. He had used cold water at first, but found that in weak patients and many of those suffering from amebic dysentery it caused collapse. He found 115° F. not enough to cause disappearance of the ameba. With care, however, he has been able to have his patients stand injections of 131° F. This, of course, cannot be borne at once, but patients have to become accustomed to the temperature. Water at 105° F. is allowed to run in at first, and then after a time at 110° F., and then at 115° F., until after a certain number of sittings patients can eventually stand up to as high as 130° F.

Dr. Tuttle, in closing the discussion, said that he treats ulcers in the rectum locally with antinosine. It must be remembered, however, that no drug will reach the germs in the submucosa. As regards the objection that has been made that the suggested operation upon the appendix with the leaving of an opening into the cecum is too serious a consideration for the treatment of amebic dysentery; it must not be forgotten that while an amebic dysentery lasts there is always danger of the occurrence of liver abscess and that once this development has occurred, the case invariably runs a fatal course. An operation which should have no mortality even though it does involve considerable discomfort and inconvenience is not too high a price for a patient to pay for freedom from so serious a danger.

Tuberculosis and the Family Physician.—Dr. S. A. Knopf, of New York, said that the solution of the serious problem of tuberculosis in large cities depends mainly upon the family physician. Unless he is able to recognize the affection early and to begin the proper treatment there is little hope in most cases of the tuberculosis being discovered before serious pathological conditions have developed in the lungs. Dr. Knopf believes in the old-fashioned idea of a family physician to whose care is entrusted the health of the family. A time will come doubtless when he will be asked to examine members of the family at regular intervals, even though there may be no special need for treatment. It is especially important that for health's sake there should be periodical examination of the chest of each member of the family. Dr. Knopf said that undoubtedly the family physician would do much to prevent the evils which now flow from the immense consumption of patent medicines in this country. Many of the cough remedies so frequently advertised, and which patients are prone to take contain morphine and other drugs, which seriously injure the appetite and are the worst possible agents for a consumptive to take. On the other hand, many of the tonic remedies widely advertised are scarcely more than combinations of whisky with certain bitter principles. Some of the best known of the tonics, the sarsaparillas and remedies for women's ills contain from 25 to 45 per cent. of alcohol. This has been shown by the investigations of the Massachusetts Board of Health. Dr. Knopf said that quacks and others succeeded in obtaining testimonials by the most questionable methods. The patient who has recently been under his observation, and who is suffering from tuberculosis in its last stages, said that twice deceived by the fact that the great Professor Koch's name seemed to be attached to it, he had been tempted to take the Koch lung cure. After the course of treatment had expired and she was not able to pay any more, the physicians attached to this institution offered to treat her for a longer period free of charge, provided she would sign a testimonial that she had been examined by three reputable physicians and found to be in the last stages of consumption and had been cured by Koch's methods.

Appendicitis and Influenza.—Dr. Marvel, of Atlantic City, showed by a series of statistics that appendicitis seems to bear a certain relationship to grip. Examination of hospital records in Philadelphia in recent years seems to show that at times when grip is raging with greater virulence, there are more cases of appendicitis. There is an intestinal influenza which apparently weakens the resistance of the appendix, hence the acute inflammatory disturbance which results. Winternitz has seen many cases of appendicitis which he considers due to the influenza bacillus. Lucas Championnière, the distinguished French surgeon, considers that the etiological relationship between the two diseases is very close in many cases. Surgeons generally

who have been in communication with Dr. Marvel, are much more inclined to consider that there is a relationship between the two diseases than are medical men.

Dr. De Lancey Rochester, of Buffalo, said that it is unlikely that there has been more real influenza during the past five years than during the preceding five years, though, of course, there has been more appendicitis, because of the better diagnosis and readier recognition of the disease. It is an interesting subject for observation, but as yet nothing can be said.

Dr. Robert Morris, of New York, said that he considers influenza to be a prominent predisposing cause of appendicitis because the presence of the bacillus of influenza in the intestinal tract causes the swelling of the mucosa of the appendix and this leads to lowered resistive vitality, during which bacteria easily find a nidus for growth.

FOURTH DAY—JUNE 10TH.

Aneurism of the Innominate Artery.—Dr. A. P. Francine, of Philadelphia, reported in detail six cases of aneurism of the innominate artery collected from the 3,309 autopsies at the Philadelphia Hospital with two additional cases from the Pennsylvania and Episcopal hospitals. Besides this he gave the details of 138 cases collected from the literature. Among the symptoms of innominate artery one of the most prominent is the weakness of the right radial pulse. As a matter of fact, however, the pulsation in all arteries on the right side is weaker than on the left and the carotid is usually noticeably weaker, while the weakness in the right temporal is apt to be more noticeable even than in the right radial. As the result of the tumor there is nearly always diminished resonance at the apex of the right lung and there is distinct tactile fremitus near this increased resonance. The tumor of innominate aneurism is nearly always superficial. In its growth it sometimes forces out and upward the clavicle. Dysphagia is less prominent with this form of aneurism than with aortic aneurism and a curious feature is that this symptom is apt to be more prominent at the beginning than it is later, when the innominate tumor forces itself past the clavicle. The larynx and trachea are, however, more compressed than with aortic aneurism and the voice is more interfered with. There is a regurgitant quality of the right radial pulse which has been noted as pathognomonic of innominate aneurism.

Pathology of Arthritis Deformans.—Dr. Thomas McCrae, of Baltimore, said that the term infectious arthritis would better be limited to arthritis due to a specific organism. There is apt to be confusion without this. Whether arthritis deformans is due to a specific organism or not, is not yet decided. The important question in pathology is whether there are two distinct diseases, one producing hypertrophy and the other atrophy, or whether these are only types of a single disease. The relationship of these diseases to acute articular rheumatism is extremely doubtful if it exists at all. There is the history of cases in which after an attack of acute rheumatism fifteen years before arthritis deformans developed. The majority of the pathological descriptions are those of late changes in the disease, and in order to decide many of the important questions the earlier changes must be studied. Not all cases of arthritis deformans go on to joint deformity. Some of them are mild and get entirely well or so nearly well as not to be a source of inconvenience or unsightliness. In most cases, however, there is either an atrophy or a hypertrophy of joint tissues. Goldthwaite, to whom is owed most of the knowledge of the disease here in America, says that either of these forms may occur at any age from two to seventy years. Most authorities are agreed that at first there is synovial inflammation, followed by atrophic changes and later complete disorganization of the joints. Hypertrophic changes involving mainly the bone may occur after this and some observers have seen this succession of events, but there is yet some doubt about it. The same histological changes are noted in the joints as in other forms of arthritis as those due to the gonococcus or to certain of the pus cocci, or even to the tubercle bacillus. Periarticular changes are usually quite marked.

Hypertrophic Changes.—Dr. Garrod, the distinguished English authority on arthritic conditions of various kinds, who has had the advantage in this matter of seeing and knowing the histories of cases observed also by his father, says that he has never seen a progression from the atrophic to the hypertrophic form. The predominant feature of many cases, however, is a bony overgrowth accompanied by eburnation and erosion of cartilages. In most cases there is partial or complete involvement of the spine, with hypertrophy between the vertebræ, but also the deposit of bone in the ligaments of the parts. These deposits are apt to be curiously irregular as may be seen by specimens preserved in the English museums. While this disease has been described under the name of spondylitis, the spine is seldom affected alone, but usually there is also some involvement of the shoulder and hip. The term monoarticular has been used but this seems unfortunate, for the disease is typically arthritis deformans and is very seldom entirely confined to one joint, though the symptoms may be very prominent in one large joint. In these cases it is particularly the hypertrophic type that is seen.

Still's Disease.—This is an affection which has been described by the English physician, Still, as occurring in children from the age of two to five years, with polyarthritis, polyadenitis and enlarged spleen. There seems no good reason, however, for separating this affection from the rest of the group of acute arthritis deformans. Affections resembling Still's disease, as it occurs in children and with the same typical features, are noted in young persons over fifteen years when they are always considered as examples of arthritis deformans. The multiplication of terms then is without good reason. In certain cases the hypertrophic and atrophic form may coexist. The hypertrophic form being seen especially in the spine, the atrophic in the peripheral joints. There is question whether the disease is due to disorder of the nervous system or whether it is a specific infection, or due to multiple infection. The symmetry of the disease, its occurrence at the periphery and progress toward the body and the trophic changes in joints resembling those in Charcot's disease or in syringomyelia, seems to point to some central nervous disturbance. As a matter of fact, however, the disease is not so symmetric as is said and does not necessarily begin in the small peripheral joints as it may affect the large joints. There is absence of evidence to any involvement of the central nervous system, except in a few cases in which the cells of the anterior horns of the spinal cord were injured.

Specific Infection.—Recently certain microbes have been discovered supposed to be specific for the disease. They were isolated from the case and their injection after culture was followed by hypertrophic osteoarthritis in the rabbit. It remains to be seen whether this work will be substantiated by others. The possibility of a combination of infections must be borne in mind. The gonococcus may produce lesions very similar to those of arthritis deformans. In the 170 cases seen at Johns Hopkins Hospital, heredity seemed to be a predisposing factor. This was not marked, but, as in cancer, the affection seems to run in families.

More males than females were under treatment at Johns Hopkins, but this is the only list of over 100 cases in which this is true.

History of Arthritis Deformans.—Dr. James J. Walsh, of New York, said that the disease, while only recently separated from rheumatism, is very old. Mummies have been found with the distinct pathological changes of the disease. Virchow found bones in a medieval graveyard with signs of the affection. Botticelli's model seems to have suffered from the disease, and as he followed the outlines of her fingers closely in painting them the result is, he is accused of painting ugly hands. The English museums are rich in specimens of arthritis deformans from the last hundred years—before the disease was acknowledged to be distinct. English observers, especially such conservative authorities as Garrod, Hale White, and Bannatyne, consider that there are three forms of arthritis deformans from the clinician's standpoint. The first is a chronic deforming affection which occurs particularly in the smaller joints and gradually involves more and more until considerable disability results. This occurs a little more frequently in old women than in old men and is not very distinctly separated from Heberden's nodes, though this latter affection may after a time progress no farther than a certain amount of nodular deformity of the joints of the terminal phalanges and there is a well-grounded English tradition that sufferers from arthritis deformans are long lived. The second form of the disease is an acute affection resembling ordinary rheumatism in its onset, but running a febrile course of lower degree and not getting entirely well as does acute articular rheumatism. The third form of the disease is usually a deforming process limited to one large joint. The joint most commonly affected is the hip and after this the shoulder. This is the only form of arthritis deformans that is likely to attack men more than women.

Differential Diagnosis.—The important point in differential diagnosis is the recognition of acute arthritis deformans from acute articular rheumatism. Arthritis deformans occurs more commonly in young women, though it may affect young men. The temperature is usually not above 102° F. and sometimes during the course of the disease may not exceed 100° F., and yet there may be distinct swelling and tenderness, especially of the smaller joints. The disease affects by preference the small joints of the hand, or those of the toes, though it may invade other joints. In nearly all cases there is some involvement of the joints of the cervical vertebræ and also of the temporomaxillary joint. The most important differential sign is the involvement of the jaw. This may only proceed to the extent of tenderness over the joint, with some difficulty of mastication. The soreness in the neck may be attributed to spasm instead of to the true joint affection, but such it is. The prognosis of the disease is not very favorable. As a rule, it may be said when what seems to be acute articular rheumatism fails to respond to the salicylates in the matter of being less uncomfortable and when there are signs of exudation into the joints and thickening, which does not begin to disappear after ten days, the frank recovery common in rheumatic arthritis must not be expected. Usually quite a little deformity is left. This may gradually disappear, however, leaving a certain amount of thickening that makes movement awkward, but is not unsightly. Even where there has been considerable ulnar deformity of the fingers, practically complete recovery is not impossible. There is a distinct tendency, however, for the disease to recur. The first attack is seldom completely recovered from and within the year, usually within some months, there is another lighting up of the affection which leaves more deformity than before.

Predisposition.—The disease seems to occur with sufficient frequency in families, to speak of a certain predisposition to its recurrence. This seems to mean no more than that a certain congenital condition of joints is favorable to the beginning of the disease. As a rule, the affection occurs in overworked people, especially those who are confined much to the house. It occurs typically in young servant girls at times when they are run down in health and seems to have a special tendency to occur in such persons not long after they have removed into a new country. It has often been noted that anemia and other constitutional disturbances are not rare about this time and arthritis deformans occurs with more frequency than at other times. Most patients give a history of having been exposed to some inclemency of the weather, but not infrequently it will be found that this cannot be connected directly with the affection. Sometimes there is a history of preceding rheumatism, but usually this is found to be no more than neuritic and neuralgic pains without any of the real characteristics of rheumatism.

Treatment.—Clarence E. Skinner, of New Haven, Conn., said that the most important question is that of exact diagnosis. Arthritis deformans differs from arthritis due to the pyogenic microorganisms or the gonococcus and its prognosis is a little better. In the textbook reconstructives, potassium iodide, cod-liver oil, iron and health springs are the chief remedies. Dr. Skinner considers that the most important considerations in the disease are proper diet and properly regulated physical therapy. As a rule, patients come for treatment in a run down condition and not infrequently they have been advised by physicians to limit their diet. Meat has often been denied them, especially red meat. As a rule, however, it will be found that they digest very well and that the system is craving for the elements found in red meat. Limitation of diet should be made with regard to the starches, though not infrequently it will be found that there is a disturbance of starch digestion. They should be made to wear woolen clothing next the skin and should be encouraged after the acute stage of the disease has passed to use their joints. This should not go to the extent, however, of breaking up adhesions, as only evil results come from it. Massage is not only indicated, but is one of the most important methods of treatment. Probably the most important remedial measure is dry, hot air. This does not mean hot-air baths at 200, but hot-air applications at 400 to 450. Frequent sweatings and ordinary hot applications serve to weaken patients and relax tissues and do more harm than good. A hot-air bath at 400, however, given in a cylinder covering the body up to the neck, acts as a stimulant that somehow brings about amelioration of the arthritic condition. Certain of the tonic and alterative drugs seem to be of service in special cases and a proper selection must be made for the individual. Potassium iodide has advocates and iron and chloride of gold may be found useful. The salicylates serve to relieve pain in cases where acute rheumatism is engrafted upon the original arthritis deformans. In the form of aspirin this will sometimes decrease the discomfort. Where there is constipation salt laxatives must be freely used. Digestive disturbances lead to the need to be corrected; for local pain, hot applications such as the hot-water bag are of service. Static electricity seems to do more than any other form for the affection. The wave current, applied by means of sheet tin electrodes molded to the heart lessen the discomfort and add to the flexibility of the joints. For local fibrous enlargements, the static

spark does good and for neuralgic conditions, the static spark is also useful. D'Arsonval's high frequency cage has been highly recommended and there is helpful general stimulation in central galvanization. Vibratory stimulation by lessening the spasm of muscles connected with the affected joints often serves a very useful purpose.

Types of Arthritis Deformans.—In opening the discussion, Dr. Joel Goldthwaite, of Boston, said that while it seems advisable to do away with multiplicity of terms, certain types of disease must be recognized. There is not only atrophic and hypertrophic arthritis deformans but also an infective type. It is hard to differentiate the microorganisms that may be responsible for the conditions, so that the general term seems advisable. In certain cases an enlargement of the ends of the bones is followed by atrophy of joint structures because of decubitus, as the ends of bones are pressed together. With regard to Still's disease, this seems to belong to the infective type and may be seen also in adults. When the spine is affected it is especially the cervical spine that is involved. With regard to acute and chronic arthritis deformans there seems to be a definite distinction. Bannatyne, the English authority, says that some acute cases never become chronic and some chronic cases have no history of having been acute. Dr. Goldthwaite believes that heredity may prove a predisposing condition. This is not a direct inheritance of the infectious disease, but rather the joints are of lower vitality, which almost invites infection. Such inheritance is not unusual. Weak feet or flatfoot may be inherited and often runs in families. Other joint conditions may follow the same rule. Monoarticular arthritis deformans seems an unfortunate term, since the disease is very seldom confined to a single joint and investigation will usually show more or less involvement of other joints.

Gonorrheal Arthritis.—Dr. F. C. Valentine, of New York, said that arthritis deformans occurs with more frequency in women than in men. It is in women that the lesions of the gonococcus are more destructive and the microorganism is more likely to get into the circulation with metastatic consequences. It seems not unlikely that some cases of arthritis deformans are really gonorrheal in origin, or, at least, that this microorganism has provided the basis on which other affections arise.

Hot Air Treatment.—Dr. De Lancey Rochester, of Buffalo, said that even without the cumbersome hot-air apparatus, it is still possible to obtain good results in the treatment of arthritis deformans. Hot-air baths may be given in bed by means of a spirit lamp, and if followed by friction of the skin, relaxation need not be feared. Massage careful passive movements will also be found of service. The affection occurs not infrequently in stout people and in these particularly sweats and massage are likely to be of service. The regulation of diet should exclude sweets and not much starch should be allowed. Fresh green vegetables, which contain organic iron in a form readily available by the system should be freely used. Where there is any tendency to constipation, salines should be given.

Secondary Infections.—Dr. McCrae, in closing the discussion, said that the gonococcus is not an etiological factor in the production of arthritis deformans, though the joint symptoms in chronic cases of the disease may be lighted up after gonorrhea or dysentery or other infection, as regards the word chronic rheumatism, it should be employed only for the condition in which symptoms of acute rheumatism, keep recurring. As for instance, when a child suffers from acute arthritic symptoms, followed by chorea and then endocarditis and a relapse of the arthritic symptoms; the index of acute rheumatism is that it leaves no sequelæ. It seems probable that all cases of arthritis deformans are infective and that the triple division of the disease is unnecessary. As a rule the mistake is made of putting patients on a spare diet. Many patients as a consequence are seen in a run down condition. The rule, on the contrary, should be to have them take the fullest possible diet consonant with good digestion.

Uric Acid and Disturbed Metabolism.—The medical profession is in many cases a creature of words. Uric acid has long been a shibboleth. It is supposed to have solved many problems. At last it is about to be abandoned. In this matter of rheumatism words count for so much and metabolism, katabolism and anabolism, quite as blessed words as Mesopotamia, are constantly heard. Nothing definite is known in this matter—why fool with idle terms. The most important mistake that they have unfortunately introduced is the limitation of diet in all chronic joint cases. Dr. Walsh has seen within the last month the wife and daughter of a physician, each suffering from the painful condition at the base of the big toe that is so often noted in connection with flatfoot, who had been carefully dieting themselves for gout for more than a year. One result of the mixing up of rheumatism and arthritis deformans is the free use of the salicylates, which always do more harm than good, since they destroy red blood corpuscles, make the patient more anemic and do not relieve pain. It has been objected that until the microbic cause of rheumatism and arthritis deformans is known, there is no justification in entirely separating the diseases. At the beginning of the nineteenth century there was in the measles and scarlet fever group of diseases, as yet undifferentiated from one another, what have now come to be recognized as four distinct diseases: Scarlatina, measles, German measles and Duke's, for fourth disease. Of none of these is the microbic cause known? Surely no one would say that there is no justification for their clinical separation.

Hot Air Applications.—Dr. Skinner said that hot air at low temperatures and hot air locally applied, had not given satisfaction in his hands. Local hot air even seemed to add to the pain. As a rule, for the severer cases of arthritis deformans, sanitarium treatment is needed.

Gonorrhea and the General Practitioner.—Dr. Ferd. C. Valentine, of New York, said that the general practitioner is as competent as the specialist to treat gonorrhea so long as the disease presents no serious complications. By treating patients at once, the general practitioner has the opportunity for successful abortive treatment, which is not often afforded a specialist. Not infrequently the reference of the patient to a stranger specialist adds to and emphasizes the neurasthenic symptoms which so often complicate the disease. The irrigation treatment may be carried out even in the office of the general practitioner without danger to himself or his patient and without the necessity for soiling floor or office furniture. Dr. Valentine considers that it would be advisable if so many cases were not at once referred to the genito-urinary specialist.

Convalescents from Tuberculosis.—Dr. A. Mansfield Holmes, of Denver, Col., said that the treatment of consumption, when the disease is taken sufficiently early, is now known to be reasonably successful. No one pretends, however, that the cured tuberculosis patient is likely to be free from the disease for long, unless he takes good care of himself. He cannot, for some years at least, work as hard as others without danger of relapse. It seems important that besides sanitariums for the treatment of tuberculosis, arrangements

should be made for outdoor life for convalescents from this disease for several years after their cure has been effected. This is the main problem that must be met now in connection with sanitarium treatment.

SECTION ON PEDIATRICS.

SECOND DAY—JUNE 8TH.

(Continued from Page 1198.)

Congenital Occlusion of Lacrimal Canal and Acute Contagious Inflammation of Conjunctiva.—Dr. John E. Weeks, of New York, said that this condition was frequently mistaken for conjunctivitis, because of the pus which usually forms at the mouth of the duct. Differential diagnosis is to be made by bacteriological examination of the pus. Of the treatment he said time should be allowed possibly two or three months, for nature to open the duct, but if this does not occur the duct should be opened by instrumentation. He said that acute contagious conjunctivitis in infants is due to infection by one of four organisms, the gonococcus, the pneumococcus, the Klebs-Löffler bacillus, or the Koch-Weeks bacillus, that the value of differential diagnosis was important because of the assistance which this gave in treating the condition in the eye as well as the original site of infection and in the management of epidemics. The virulence of the conjunctivitis, he said, could not be depended upon as an indication of the form of the infection, as there were cases of gonorrheal ophthalmia which were so mild that they might be mistaken for ordinary muco-purulent conjunctivitis, but that these same cases were capable of setting up severe ophthalmia in other individuals or of the opposite eye in the same individual. The treatment of the different forms of conjunctivitis should be cleanliness obtained by the use of boracic acid solutions and the proper application of cold or heat being governed in this by the form of the infection—cold acting best in those cases which are due to organisms which grow best at high temperatures, this he said was particularly true during the early stages of the disease. The diphtheritic form should, of course, be treated by antitoxin injections. The silver preparations are useful in the gonococcus infection, but local treatment should be exercised not to interfere with the nutrition of the cornea.

In discussing Dr. Claiborne's paper Dr. Bennett, of Buffalo, said that in examining the eyes of truant children he had found a large percentage of refractive errors, thus in a measure accounting for their lack of interest in their school work and said that in several cases of persistent vomiting he had found the cause in the eyes of the patient.

Dr. Jarecky, of New York, said that he had followed up many cases of chorea treated at the German Policlinic and that correction of refractive errors in these cases had not been followed by improvement in the choreic symptoms in a single case. Glasses, he said, which are used to correct astigmatism in children, should be worn only temporarily and should be considered merely one of the resources at our command for restoring the child to normal condition.

Enuresis.—In a report of cases observed in dispensary practice, Dr. Maurice Ostheimer, of Philadelphia, said that Dr. I. Valentine Levi and himself had formed these conclusions: That while there is no single cause of enuresis, reduced tone of the sphincter muscles is present in most cases and that this is often the result of some antecedent or simultaneous illness. Among the many methods of treatment they found that in the vast majority of cases recovery followed the administration of the tincture of belladonna in ascending doses in the mild cases and of atropine and strychnine in the intractable cases. In the latter treatment they had begun with atropine gr. $^1/_{240}$ and strychnine gr. $^1/_{60}$ to one drop of water gradually increased until incontinence ceased and continued at the highest dose for from two to four weeks, and then gradually descended so that the entire treatment usually covered from six weeks to four months. The ingestion of fluids after supper was stopped and errors in diet were corrected in all cases. Daily cold sponge baths of two minutes' duration were given, and if hyperacidity of the urine had been present potassium citrate had been given and if phymosis existed circumcision was performed.

Bacteriology of Summer Diarrhea.—Dr. Wm. H. Park, of New York, pointed out the great difficulty of finding the specific bacterial cause of any given case of diarrhea because of the large numbers of organisms present normally in the intestines, many of which are not ordinarily inimical to health, but which under conditions occasionally arising might be productive of severe diarrheic symptoms. He said that of the enormous numbers of bacteria always present only a very small number of forms was pathogenic, and of these the ones studied closely resembled the colon bacillus in their biocultural characteristics that great difficulty had been experienced in isolating them. The term colon bacillus, he said, covered a great group, some varieties of which were pathogenic and developed at times at the expense of the other forms producing a diarrhea. The Shiga bacillus which had been isolated from the stools of dysentery patients in Japan was not the same as the dysentery bacillus found in this country, which, however, it closely resembled. In regard to the serum treatment of dysentery he said that results had been unsatisfactory presumably because when inflamed conditions exist in the intestinal tract it is practically impossible to counteract the activity of all of the pathogenic organisms present.

Infantile Dysentery.—Dr. J. H. Mason Knox, Jr., of Baltimore, analyzed 43 cases in which the *Bacillus dysenteriæ* (Shiga) had been found in the stools. These showed that the infection was borne by some common carrier and a close study, he said, had practically excluded previous conditions as to surroundings, foods, etc., and that drinking water was no doubt the means by which the bacillus entered the body, although the possibility of the house fly as an infecting agent must be considered. The Harris acid-mannite organism, so-called, was found in each case, but the clinical picture varied greatly, two general types occurring, however, one in which profound toxemia was present, the other being characterized by the severity of the bowel symptoms with mucous or bloody diarrhea. This difference in the symptoms may be due to the greater or less activity of other bacteria, *e.g.*, streptococci or staphylococci.

Bacillus Dysenteriæ and Infantile Diarrhea.—A study of 237 cases by Dr. L. Emmett Holt, of New York, showed that the bacillus may act pathogenically not only in summer but also during the winter months, and diarrhea occurs as a result both in children previously healthy, and in those already more susceptible because of disease, it occurs in various forms and under all conditions but previous conditions were found to have influenced the course of the diarrhea, as for example, 26 of the cases were breast-fed babies and presented milder symptoms and offered greater resistance to the disease, while of the 73 fatal cases the majority were among the hospital type of patients. In the management of diarrhea Dr. Holt advocated the withdrawal of milk as an article of diet particularly in

the severe cases, and because of the probable infectious character of the discharges from the bowel these, he said, should always be disinfected. He urged further study of the serum treatment and expected favorable results from its use in those cases of diarrhea in which the problem is to treat the infection and not the general condition which was present in so many cases before the acute symptoms occurred.

Diarrhea in Children.—Dr. J. C. Cook presented a study of 29 patients in the investigation of which he had attempted to prove a connection between the bacteria in the buccal cavity and those present in the intestines. His results were negative.

Management of Summer Diarrhea.—Dr. Thomas S. Southworth, of New York, said that this should begin before hot weather by hygienic and dietetic prophylaxis. The danger he said among infants was chiefly in proportion to artificial feeding and the greatest safety is secured by heating the milk, however, pure. Among older children errors in diet as well as bad milk are exciting causes, but local conditions and lesions once started are progressive and are intensified by a milk diet and under these conditions toxemia is the prominent factor. In severe cases prompt elimination of milk from the diet reduces the mortality. Opium should be used only to control excessive peristalsis. During the discussion of the foregoing papers on summer diarrhea the value of the so-called water treatment of the French physicians was emphasized, but that, because of differing social conditions, the substitution of barley water for plain sterile water was preferable in this country; that attention to absolute cleanliness, preliminary flushing out of the bowel, followed by the "starvation" plan of treatment with little or no opium, followed by gradual resumption of a carbohydrate diet, were the chief factors in the successful treatment of summer diarrhea in children.

Landry's Paralysis.—Dr. Henry Enos Juley, of Louisville, Ky., reported a case of this little known disease and suggested the possibility of a specific organism as a cause.

Hematuria in Infantile Scurvy.—Dr. John Lovett Morse, of Boston, said that although hematuria was generally considered an unusual complication of scurvy it is in reality a frequent symptom, that hematuria in a child accompanied by tenderness along the spine and elsewhere was a sufficient cause for making the diagnosis of scurvy, particularly if it cleared up upon the administration of antiscorbutic treatment—orange juice being the most frequently used in his practice.

Dr. Stowell, of New York, said that the hematuria of scurvy and the hemorrhages into the skin are probably due to a common cause, possibly a specific germ.

Intestinal Obstruction in Children.—Dr. John F. Erdmann, of New York, said that obstructions are due to intussusception, strangulated hernia, post-operative bands or Meckel's diverticulum. Intussusception, he said, was not a common cause and when it is met with it is not the sausage-shaped tumor of the text-books. Frequently it closely resembles floating kidney, or appendicitis and differential diagnosis may not be possible till laparotomy is performed. The symptoms were, he said, severe, sharp, colicky, abdominal pain, recurring periodically with an elevation of temperature. Treatment of this condition is mechanical, which consists of attempts to reduce it by enemas, but this should never be continued longer than six hours, after which operative treatment should follow. The danger in depending upon injection lies in the liability to reduce all of the intussusception except the part at the iliocolic junction and having at the same time a subsidence of symptoms, but which would be followed by more severe symptoms later when the remnant of the intussusception became gangrenous. In spontaneous reductions or those produced by injections the test of the completeness of the reduction should be the passage of a large bowel movement.

Dr. Abt added one other form of obstruction to the foregoing classification—that due to paralysis of the gut during the course of a profound disease elsewhere, such, for instance, as occurs in pneumonia; ptomaine poisoning may also simulate intestinal obstruction.

Dr. S. W. Kelly, of Cleveland, Ohio, said that if seen early spontaneous reduction might follow the use of opium, and that in the treatment by enema pressure of four or five pounds continued for fifteen or twenty minutes beginning with air and following this by water often produced a complete reduction where less pressure or pressure withdrawn after a shorter period of time might not effect a reduction.

Dr. Erdmann said, in closing, that he had always found great difficulty in keeping either the air or the water in the gut and that too great pressure was dangerous because of the weakened and edematous condition of the gut wall, but injection at the time of the operation was helpful.

Perinephritis in Children.—Dr. Wisner R. Townsend, of New York, said that this condition is rarely diagnosed correctly, and almost never before the formation of an abscess, but differentiation he said is possible. The conditions for which it may be mistaken are Pott's disease or hip-joint disease from which it may be diagnosed by the difference in the appearance of the stiffness about the part affected in the former and in the immobility of the hip-joint in the latter, from lumbago in the absence of leucocytosis in this, while an increasing leucocytosis occurs in perinephritis. The treatment, he said, is expectant—rest in bed and milk diet, till abscess formation, then it should be operated upon.

Dr. Jacobi called attention to the etiological importance of constipation in this condition.

Diagnosis of Enlarged Bronchial Lymph-nodes.—Dr. Alfred Friedlander, of Cincinnati, said that although great difficulty is present in making a diagnosis of this condition, the enormous frequency of tuberculosis of these glands, as shown by the post-mortem examinations made even a presumptive diagnosis of vast importance. Of value in this connection is a peculiar paroxysmal cough similar to that of pertussis but without the blowing inspiration, dyspnea or exertion with no heart lesion, hoarseness, with the general indications of a tuberculous condition, all these, with possibly evidences produced upon palpation and percussion over the mediastinum will give highly presumptive indications of tuberculous glands. The possibility of an enlarged thymus gland must not be forgotten, and also that enlarged bronchial glands may occur in pertussis and in measles. He said also that he had found in ten cases in which there were clinical symptoms of enlarged bronchial lymph-nodes, a reactionary lymphocytosis. He hoped further investigation might prove this a more certain method of diagnosis in this condition.

Dr. T. W. Kilmer, of New York, said that the cough, such as had been mentioned by Dr. Friedlander, was frequently due to abnormal retropharyngeal conditions.

Early Aural Examinations in Acute Diseases in Children.—Dr. James F. McKernon, of New York, said that middle-ear complications are far more frequent than is generally observed, that if aural examinations were regularly practiced as a part of every physical examination the cause of continued elevation of temperature after other symptoms had subsided

would be more freqently found. It is a fallacy, he said, to think that pain is always present in otitis media since a large percentage of cases never have any pain at all and careless otoscopy may not reveal the true condition of the drum. As an example of deceptive appearances he described a condition in which there was apparently a normal drum, but upon touching it with a probe, that which had seemed the drum was only a desquamated flake of epithelium which crumbled and came away, revealing an inflamed drum behind.

Dr. Fischer, of New York, said that he had frequently observed cases of acute disease in children in which there had been a subsidence of all symptoms except restlessness at night, the patients having normal temperature and pulse. This had been followed by spontaneous perforation of the ear drum and a discharge of pus with a complete clearing up of symptoms. Too frequent irrigation of the nasal passages, he thought, was a frequent cause of middle-ear disease.

Dr. Kerley reviewed 51 cases of acute otitis media in children, in 34 of which there was no pain or local manifestation; the only reason for making an aural examination being an elevation of temperature.

Dr. McKernon further said that if the ear drum bulges at all it should be incised at once, and there were many cases in which because of the danger of jugular bulb, or mastoid involvement paracentesis should be done even before bulging occurs. He said also that those cases of mastoiditis which had not been operated upon for the purpose of evacuating the pus usually resulted in deafness.

Some Physical Signs in Children not Sufficiently Emphasized.—This paper, read by Dr. Samuel McClintock Hamill, of Philadelphia, gave the results of observations made by himself and Dr. Theo. LeBoutillier on a large number of normal children. Of the lung they found the following conditions peculiar to children: (1) An area of impaired resonance under the left clavicle. (2) An area over the root of the lung in which there is a transmission of bronchial type of breathing. (3) Position greatly influences the percussion note. Of the heart: there was found a slight difference in the outline of heart dulness, but more marked was the fact that up to the sixth year the apex beat was found in the fourth interspace in the midclavicular line.

Hernia in Infancy.—Dr. Wm. B. Coley, of New York, said that the question whether the treatment of hernia in children should be mechanical or operative should be answered only when all conditions surrounding the individual child had been considered. If the child could be properly cared for and watched to see that the truss was kept in position then this method should be tried up to the age of four years. If, however, the truss does not retain the hernia, or if the hernia is irreducible or there is an accompanying hydrocele, or, if strangulation occur, a radical operation should be performed. If after trial of mechanical treatment up to the fifth year there is no cure of the hernia then operative treatment should follow. If seen after this age for the first time, and there has been no treatment by means of a truss, the peculiar conditions present must be considered in deciding upon the best treatment. In the treatment of umbilical hernia, the use of a flat button covered with soft cloth should be applied over the umbilicus and held in place by means of adhesive plaster. The Bassini operation is the one preferred by Dr. Coley, using, however, kangaroo tendon instead of silver wire as sutures and transplanting the cord as is the custom of most surgeons at the present time. He said that the belief that malignant disease is liable to occur in an undescended testicle was not upheld in his experience as he had seen only one case of this in an experience of 1,260 cases operated upon, and that there had not been one case in the 60,000 recorded at the Hospital for Ruptured and Crippled. Strangulation, he said, is comparatively rare in children and when it does occur it is due to adhesions and does not occur at the neck of the sack. As to the results of operative treatment in children the risk is very small (less than one per cent. of infections at the site of operation since the advent of rubber gloves, and only four per cent. before that), and as any operative treatment will be more productive of good results in the child than in adults the chances of permanent cure are practically certain.

Chorea.—Dr. W. C. Hollopeter, of Philadelphia, said that there is now less chorea than there was fifty years ago, and that this was due to the improved hygienic surroundings of the child. Much is said about the excess of school work put upon the child of to-day, but he thought that this was overvalued in its causation of chorea, the effect of poor personal hygiene in the home surroundings, irregularity in daily life, overfeeding, etc., being more potent. One writer on the etiology of chorea has said that it is a brain disease, while the relation between rheumatism and chorea is an interesting question not yet settled. The most important contribution to the knowledge of this disease has come from the discussion at meeting of the British Medical Association in July, 1903, the essence of which was that chorea is a disease of microbic origin. A diplococcus has been isolated from cases of chorea and there seems to be reason for the belief that this is implanted upon a previous micrococcus infection making, if this is true chorea, a mixed infection. A diplococcus has also been isolated from rheumatic patients which is believed to bear a close relation to that of chorea.

In the treatment of chorea, Dr. Hollopeter has abandoned the use of specific drugs and depends upon prolonged warm baths. These he gives twice daily, each one lasting from one to two hours. The temperature of the bath should be such as to give the child no unpleasant sensation (usually from 90° to 98° F.). From this temperature it is cooled down till it soothes the whole cutaneous surface. After the child has been in the bath for the required time gentle massage is given and the child dried and allowed to sleep. In from 50 to 60 cases treated in this way he has reduced the duration of the attacks from three months to six weeks.

Nasal Affections of Children.—Dr. Louis J. Lautenbach, of Philadelphia, said that children are great sufferers from obstruction of the nostrils. They are very prone to diseased conditions affecting the nose and occluding the passageway. The mischief thus occasioned is common, and unfortunately often very serious to the life of the child as well as to its health. Along the respiratory apparatus tonsillitis, pharyngitis, laryngitis, but particularly bronchitis and pneumonia, are commonly so caused—in great part by the mouth-breathing. Stomach and intestinal disorders are frequent results of nasal disease. Nervous affections and lack of mental and physical development are by no means unusual. General lack of vitality and that indefinable something called a cold are frequent results. Lack of development of the dental arches and irregularities in tooth formation as well as placement can very often be traced directly to nasal disease, the widespread mischief thus caused lasting often through life. An impartial, unbiased examination will nearly always develop a satisfactory diagnosis. The connection between secondary conditions and the primary cause may not be clear, but when once understood the local and general treatment can be instituted harmoniously and

the results will more than repay for the difficulties encountered. Fortunately nasal troubles are easily cured as a rule.

Myxedema and Diabetes Mellitus.—Dr. A. A. Strasser, of Arlington, N. J., made a very complete report of this unusual combination.

SECTION ON NERVOUS AND MENTAL DISEASES.

FIRST DAY—JUNE 7TH.

The meeting was called to order at 2.15 P.M. by the Secretary, Dr. David I. Wolfstein, of Cincinnati.

Resolutions on Dr. Pearce.—Owing to the death of Dr. F. Savary Pearce, Dr. Howell T. Pershing, of Denver, Col., was elected Temporary Chairman, and there was no Chairman's Address. A committee composed of Drs. Charles K. Mills, Philadelphia; Richard Dewey, Wauwatosa, Wis., and W. J. Herdman, Ann Arbor, Mich., was appointed to draw up resolutions on the death of Dr. Pearce, and a similar committee on the death of Dr. Orpheus Everetts, of Cincinnati, Ohio, was composed of Drs. F. W. Langdon, Cincinnati; Hugh T. Patrick, Chicago, and Dr. Brainerd.

Public School and Health.—The report of the Committee on the Collection of Information Regarding Public School Methods and Their Effects upon the Mental and Physical Health of School Children was read by Dr. W. J. Herdman, of Ann Arbor, Michigan, the committee consisting of Drs. F. Savary Pearce, James McBride, Hugh T. Patrick, C. H. Williams and W. J. Herdman. He reported that the collection of the data on this subject was as yet incomplete and considered (1) the medical examination of the child at the time it enters upon school life, and (2) the examination during the years thereafter. There are many other factors such as the hygienic and sanitary surroundings in the schoolrooms and buildings, which have to be eliminated before the schools methods can be charged with affecting the health of the children. The work in this and other countries was reviewed and particularly considered under the following subdivisions: (1) Inspection of pupils and teachers with a view to detecting any contagious or infectious disease; (2) investigations of the sanitary and hygienic conditions of the school buildings, rooms, equipments and environments; (3) examination of individual pupils, especially those who have attracted attention by deficiency in hearing, eyesight, etc. The material decrease in the contagious and infectious diseases among school children in New York, Philadelphia, and other cities since the institution of medical inspection in the schools was commented on with favor. Upon motion of Dr. C. B. Burr, Flint, Michigan, this report was accepted and the committee continued.

SYMPOSIUM ON CHOREIFORM AND OTHER SPASMODIC MOVEMENTS.

Symptomatology, Pathology and Treatment of Choreiform Movements.—This paper was read by Dr. William G. Spiller, of Philadelphia, in which he considered at length the clinical aspects of Sydenham's chorea, Huntingdon's chorea, posthemiplegic chorea, postapoplectic hemihypertonia athetosis and pregnancy occurring during pregnancy, laying particular stress upon the latter condition and also upon the time of life at which the disease was most likely to occur, the pathology of the two former conditions being carefully discussed. In the treatment, he considered rest in bed of paramount importance, and went fully into the details of the arsenical treatment, in which the patient should be carefully watched for symptoms of neuritis, and with which the best results are obtained when the drug is employed during the first three weeks of the disease. A report of 180 cases of this disease before the Moscow Society for Diseases of Children was referred to, 86 of which were treated with arsenic, and in these the best results were secured, the others being treated with rest, antipyrin, bromide and quinine, the least useful being the two latter drugs.

Convulsive Tic.—This paper was read by Dr. Hugh T. Patrick, Chicago. The writer belived this condition to be very common but frequently misunderstood. The characteristics of the disease were fully discussed, and the points of differentiation between it and chorea, spasm, paramyoclonus and myoclonias, abnormal movements dependent upon hallucinations or delusions, stereotypic and excessive gesticulation outlined in detail. The two principal factors upon which the prognosis depends are the nature of the disease and the nature of the subject, and while the prognosis in children is usually good, it is a most rebellious disease. He referred to one case in which prolonged artificially induced sleep had been of considerable value, while in another the same success had not been attained. The causal factor should, if possible, be found and removed, after which, in children especially, stimulation of inhibition by means of rewards for controlling a spasm and punishment for not doing so, are of value; the latter, however, must be slight as cases were referred to in which untoward results had been caused by severe punishment.

Hysterical Movements.—This paper was read by Dr. Howell T. Pershing, of Denver, Col., who stated that he believed the morbid process to be an excessive reaction due to morbid ideas and motions occurring in the higher cortical centers. The differential features of the mode of onset, and the general character of the movements were considered, the author stating that he believed a pysychic origin could generally be traced. The highly coordinated movements, such as saltatory spasm; the hysterical imitations of chorea, hysterical blepharospasm, hysterical imitations of Jacksonian epilepsy and hysterical torticollis were considered in detail seriatim, followed by suggestions as to prognosis and treatment, in which the mental influence is of paramount importance, and which must be guided by the ideas applicable to the treatment of chorea in general.

Dr. Charles K. Mills, of Philadelphia, in opening the discussion, considered Sydenham's chorea due to infection caused by the action of toxins on an exhausted nervous system, while Huntingdon's chorea came under the developmental or family type. Rest and hygienic treatment he considered of paramount importance, and the drugs which are of the most importance are those which tend to restore the tone to the nervous system.

Dr. B. Onuf, of Sonyea, N. Y., reported a case of spasm of the retina, recti muscles and pupils, which the patient began when an oculist prescribed for her white glasses, prior to which time she had been wearing colored glasses, and which he attributed to hypersensitiveness of the retina due to frequent accommodation, the light being too strong to be borne so soon as slight dilatation took place.

Dr. McGregor, of Saginaw, Mich., referred to the cases of chorea resulting from fright, several of which he related and also reported one case in which the condition disappeared upon the removal from the patient's diet of veal and reappeared eighteen months later, when this article of food was again indulged in.

Dr. Hamilton, of Independence, Iowa, referred to the work which he had done at the State hospital for the insane at that place, and gave the mode of death, clinical and pathological findings in several cases. He also reported a case in which the condition had been present in

all but two of the female members of the family for three generations, never being noticed until pregnancy, and the two exceptions were never married, although he inclined to the opinion that the chorea was present before the advent of pregnancy, which simply aggravated its manifestations.

Dr. D. J. McCarthy, of Philadelphia, reported the clinical and pathological findings in several cases, and also referred to one case which had been considerably benefited by suggestive therapeutics for a time, but afterward relapsed.

Dr. John Punton, of Kansas City, Mo., referred to a man who had been operated on five times for tic, and in whom he had a surgeon who had suggested the advisability of removing the gasserian ganglion, which was cured by means of suggestive therapeutics.

Dr. John W. Rhein, of Philadelphia, reported the pathological findings in a case of chorea dying during the second week of the second attack of the disease, in which there was some change in the muscles, but no demonstrable lesion in the spinal cord or cortex. He also referred to the possibility of the occurrence of choreiform movements in locomotor ataxia.

Dr. Wharton Sinkler, of Philadelphia, said that there was too much of a tendency to include under one general heading the conditions due to different causal factors.

These papers were further discussed by Drs. C. H. Williams and W. C. Jones, of Texas, and closed by Drs. Spiller, Patrick and Pershing.

SECOND DAY—JUNE 8TH.

Nature of Traumatic Sclerosis.—This paper was read by Dr. A. C. Brush, of Brooklyn, who after referring to the fact that the earlier observations indicated organic disease and to the physiological experiments of Mendel, Schmaus, Berkeley and others, stated that at the present time it is a question whether the effects of trauma on the nervous system are due to conditions of grave hysteria, functional neurosis or to a type of multiple sclerosis. This was followed by a careful résumé of the literature on the subject; a report of his personal clinical observations in fifteen cases, particularly differentiating between this condition and true hysteria and pseudosclerosis described by Westphal and Strümpell; and a report of the pathological and microscopic findings in five cases, particularly outlining the differences between traumatic sclerosis and multiple sclerois. In conclusion, he stated that his opinion coincided with that of Strümpel that traumatic sclerosis is different from multiple sclerosis and that the weight of evidence is in favor of a distinct organic entity.

Dr. Angell, of Rochester, N. Y., referred to the frequently long duration of these cases, during which time they were lost sight of and the consequent scarcity of pathological findings thereon. He urged the elimination of the idea of a specific form of nerve injury in the examination of the case and that such examination be similar to that in any other case of spinal trouble, irrespective of the cause. A case developing marked disturbance of the muscular apparatus six months after injury in a railroad wreck, at the time of which there was no apparent injury, was cited as showing that primary degenerative changes were no doubt minute, while the secondary changes are quite extensive. Another case illustrating the opposite type was cited, where the patient suffered from marked hysteria between the date of the collision and the trial, after which he gradually became well. He believed that only in a small minority would we find elementary pathological changes.

Dividing Line Between Neuroses and Psychoses and the Position of Neurasthenia.—This paper was read by Dr. Richard Dewey, Wauwatosa, Wis., who discussed at some length the question of a dividing line between neuroses and pscychoses, and stated if there was such a line, insanity was to be found on both sides thereof. He discussed fully the meaning and use of the term insanity and believed psychoses to be a preferable term thereto, following this by remarks on the proposition to treat neurasthenia as a psychosis and the classification recently proposed by French writers and more recently followed by C. L. Dana.

Campaign Against Insanity.—Dr. W. J. Herdman, Ann Arbor, Mich., considered the various forms of the disease and prospects for the cure thereof, and the etiology of the condition. He then reviewed the work that had been done in the United States and other countries for the study and treatment of the condition, consisting in some instances of special hospitals, in other of special wards, where the pathologists, clinicians and laboratory workers can combine their efforts, particular mention being made of the work in New York, Scotland and Michigan. He believed that the field of experimental pathology had much promise in it, but that the comparison of the mental status of the insane with that of the healthy person was the surest approach to the solution of the problem.

Dr. Searcy, of Alabama, believed the term psychosis to be much preferable to lunacy, insanity, *non compos mentis*, etc., particularly in view of the fact that in the courts of law alone lies the power to declare a man legally insane. He then classified the psychoses into the defective type, such as the manias, melancholias and phobias, and the erratic type, such the neurasthenias, hysterias, paranoias, moral delinquencies and moral perversities; and the drink and drug habits.

Dementia Præcox.—Dr. F. X. Dercum, of Philadelphia, after reciting his objections to the term, among which were the fact that many of the cases recovered, he stated that he preferred the term insanity of adolescence. He then outlined in detail the points of similarity and difference between hebephrenia, katatonia and dementia paranoides, and considered at some length the prognosis of each thereof.

Dr. F. W. Langdon, Cincinnati, Ohio, remarked upon the inappropriateness of the term dementia præcox in those cases which developed at thirty, forty or fifty unless the inception could be traced back to earlier years, which objection he felt was also applicable to the term "insanity of adolescence."

Dr. F. X. Dercum, in closing, emphasized the importance of keeping the earlier cases by themselves rather than placing them in the same group with the older ones.

(To be Continued.)

BOOKS RECEIVED.

The MEDICAL NEWS *acknowledges the receipt of the following new publications. Reviews of those possessing special interest for the readers of the* MEDICAL NEWS *will shortly appear.*

ADOLESCENCE; ITS PSYCHOLOGY. By G. Stanley Hall. Two volumes. 8vo, 770 pages. D. Appleton & Co., New York.

GRAVES' DISEASE WITHOUT EXOPHTHALMIC GOITER. By Dr. W. H. Thomson. 8vo, 143 pages. Wm. Wood & Co., New York.

A SYSTEM OF PRACTICAL SURGERY. By Drs. von Bergmann, von Bruns and von Mikulicz. Volume II. Translated and edited by Drs. W. T. Bull and C. P. Flint. 8vo, 820 pages. Illustrated. Lea Brothers & Co., New York and Philadelphia.

INDEX

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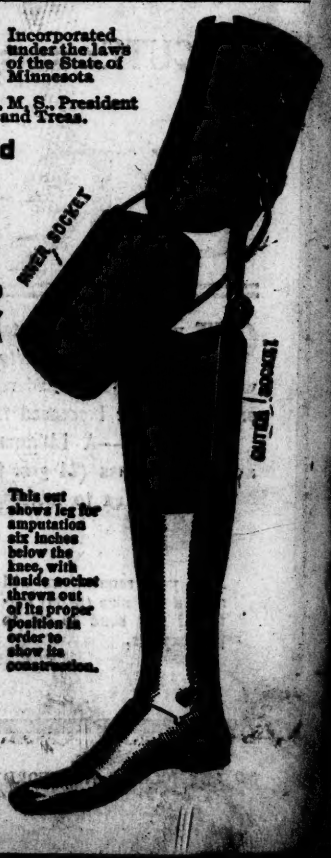

This cut shows leg for amputation six inches below the knee, with inside socket thrown out of its proper position in order to show its construction.

☞ **This is the leg that is being recommended and ordered by many of the leading physicians and surgeons.**

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